

DRAFT PLAN
FOR REVIEW ONLY
OCTOBER 21, 2016

CITY OF WAUKESHA

PLAN OF PROPOSED IMPROVEMENT
MEADOWBROOK ROAD
NORTHVIEW RD TO ROLLING RIDGE DR
WAUKESHA COUNTY

ROADWAY PLANS PREPARED BY
KAPUR & ASSOCIATES
CONSULTING ENGINEERS
414.751.7200

STORM SEWER AND BIOFILTER PLANS
PREPARED BY



STORM SEWER STRUCTURE PLANS
PREPARED BY



PREPARED BY
Surveyor KAPUR & ASSOCIATES
Designer KAPUR & ASSOCIATES
Project Manager KURT FARRENKOPF

APPROVED FOR THE CITY OF WAUKESHA
DATE: _____ (Signature)

E

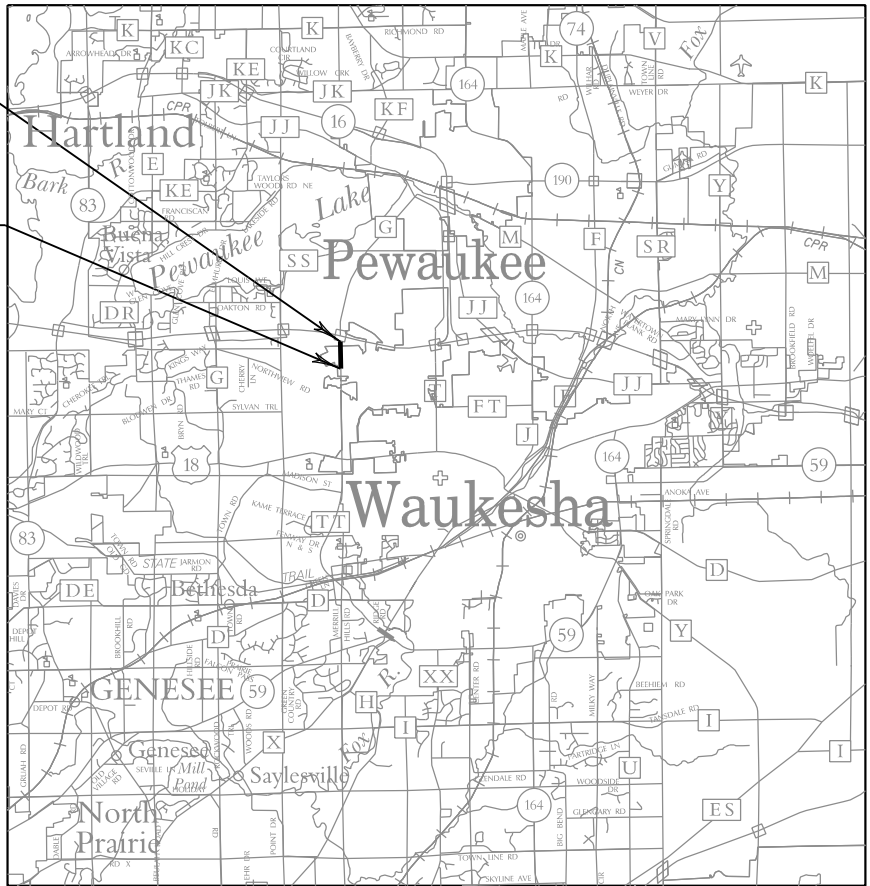


DESIGN
DESIGNATION
A.A.D.T. 2017 = 21200
A.A.D.T. 2037 = 26800
D.H.V. = XXXXX
D.D. = 59/41
T. = 8.3%
DESIGN SPEED = 40 MPH / 30 MPH
ESALS = XXXXX

END PROJECT
STA 372+60.00

BEGIN PROJECT
STA 342+31.74

R-18-E R-19-E R-20-E



T-6-N

LAYOUT
SCALE 0 0.75 Mi.

TOTAL NET LENGTH OF CENTERLINE = 0.574 MI.

-COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY
COORDINATE SYSTEM (WCCS), WAUKESHA COUNTY NAVD 83 (1991).
-ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN
VERTICAL DATUM OF 1988, NAVD 88 (1991).

COUNTY: WAUKESHA

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	

GENERAL NOTES

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

SANITARY SEWER LATERALS ARE OWNED BY THE RESPECTIVE PROPERTY OWNER AND WILL NOT BE MARKED IN THE FIELD BY THE CITY OF WAUKESHA.

ALL PRIVATE EXISTING UTILITIES NOT INCLUDED IN THE PLAN ARE TO BE ADJUSTED BY THE UTILITIES CONCERNED. STORM SEWER MANHOLES WILL BE ADJUSTED AND PAID FOR AS A CONTRACT BID ITEM.

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

THE EARTHWORK YARDAGE WAS ESTIMATED BY EXPANDING THE FILL VOLUME. AN EXPANSION FACTOR OF 1.2 WAS USED.

THE LOCATION AND LIMITS OF EBS (EXCAVATION BELOW SUBGRADE), IF REQUIRED, WILL BE DETERMINED BY THE ENGINEER. SUCH EBS SHALL NOT BE USED TO BALANCE YARDAGE. EBS WILL BE PAID UNDER ITEM, "EXCAVATION COMMON."

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN THE FLOODPLAIN OR WETLAND AREAS.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL OR SALVAGED TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE PLACED A MINIMUM OF 4 INCHES IN DEPTH.

SALVAGED TOPSOIL SHALL NOT BE PLACED ON SUBGRADE UNTIL APPROVED BY ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE RESTORED BY DIRECTION OF THE ENGINEER WITH THE FOLLOWING FINISHING ITEMS: SALVAGED TOPSOIL, SOD, AND FERTILIZER. QUANTITIES FOR FINISHING ITEMS INCLUDE RESTORATION EXTENDING 3 FEET BEYOND THE SLOPE INTERCEPT SHOWN ON THE PLANS. DISTURBED AREAS SHALL HAVE FINISHING ITEMS APPLIED WITHIN 15 WORKING DAYS AFTER GRADING WORK IS COMPLETED.

EROSION CONTROL DEVICES WILL BE PLACED IN SEQUENCE WITH CONSTRUCTION ACTIVITIES AS DETERMINED BY THE ENGINEER.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.

REMOVAL OF EROSION CONTROL DEVICES IS INCIDENTAL TO THE COST OF THEIR RESPECTIVE BID ITEMS.

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

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

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR MUST VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

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

LOCATION AND ELEVATION OF STORM SEWER STRUCTURES IN CURB AND GUTTER SECTION REFER TO FLOW LINE OF CURB.

LOCATION AND ELEVATION OF STORM SEWER STRUCTURES NOT IN CURB AND GUTTER REFER TO CENTERLINE OF COVER.

ADJUSTING MANHOLES TO GRADE SHALL BE COMPLETED AFTER PAVING LOWER LAYER OF ASPHALT PAVEMENT. MANHOLE ADJUSTMENT SHALL INCLUDE REMOVAL OF RINGS DOWN TO THE CHIMNEY STRUCTURE AND PLACEMENT OF NEW ADJUSTMENT RINGS.

EXISTING INLET AND MANHOLE COVERS THAT ARE NOT REQUIRED TO BE REUSED ON THE PROJECT SHALL BECOME THE PROPERTY OF THE CITY OF WAUKESHA.

REINFORCED CONCRETE APRON ENDWALLS AND ADJOINING TWO SECTIONS OF CONCRETE PIPE WILL BE TIED TOGETHER AS SHOWN ON THE STANDARD DETAIL DRAWINGS. JOINT TIES WILL BE INCIDENTAL ITEMS INCLUDED IN THE COST OF THE CONCRETE PIPE.

CURB HEIGHTS AT THE END OF CURB AND GUTTER WILL BE TAPERED FROM 0 TO 6 INCHES OVER 10 FEET. CHANGES IN CURB TYPE SHALL TRANSITION OVER 10 FEET.

CURB AND GUTTER GRADES AND RADII ARE GIVEN TO THE FLANGE LINE.

EXPANSION JOINTS ARE TO BE CONSTRUCTED AT ALL RADIUS POINTS IN CURB AND GUTTER ADJACENT TO CONCRETE PAVEMENT.

1/2-INCH FELT EXPANSION JOINT MATERIAL IS REQUIRED BETWEEN BACK OF CURB AND FRONT OF WALK OR DRIVEWAY APRON.

FINAL LOCATIONS OF CURB RAMP OPENINGS, SIGNALS, LIGHTING BASES, HYDRANTS, AND STORM SEWER INLETS TO BE VERIFIED BY THE FIELD ENGINEER PRIOR TO INSTALLATION.

TRAFFIC SIGNALS, LIGHT POLES, SIGN POSTS, AND SIGN PLATES SHALL BE PLACED OUTSIDE THE LATERAL CLEARANCE ZONE (MINIMUM 2 FEET FROM FACE OF CURB).

THE LOCATION OF SIDEWALK AND DRIVEWAY REMOVALS ARE APPROXIMATE. FINAL LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

EXISTING DRIVEWAYS AND FIELD ENTRANCES WILL BE RESTORED IN KIND AS DIRECTED BY THE ENGINEER IN THE FIELD AND AT THE LOCATION DETERMINED BY THE ENGINEER.

CONCRETE DRIVEWAY REMOVAL WILL BE PAID FOR AS REMOVING PAVEMENT.

BROKEN CONCRETE CONTAINING RE-BAR WILL NOT BE USED AS RIPRAP OR HEAVY RIPRAP.

A SAWED JOINT IS REQUIRED WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

SIGNS TO BE MOVED WILL BE STORED AND PROTECTED BY THE CONTRACTOR, FREE FROM DAMAGE, UNTIL SUCH TIME AS THEY ARE REINSTALLED.

UTILITY CONTACTS

CITY OF WAUKESHA - SANITARY AND STORM SEWER
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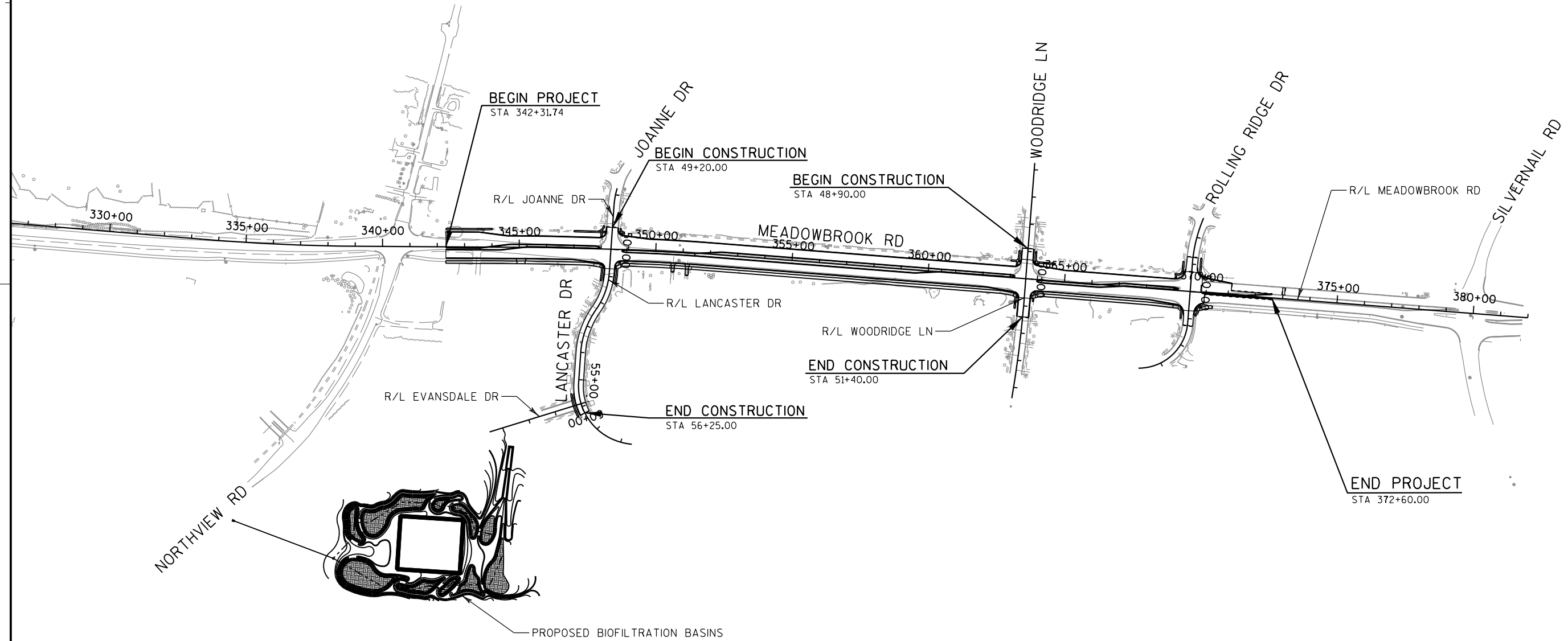
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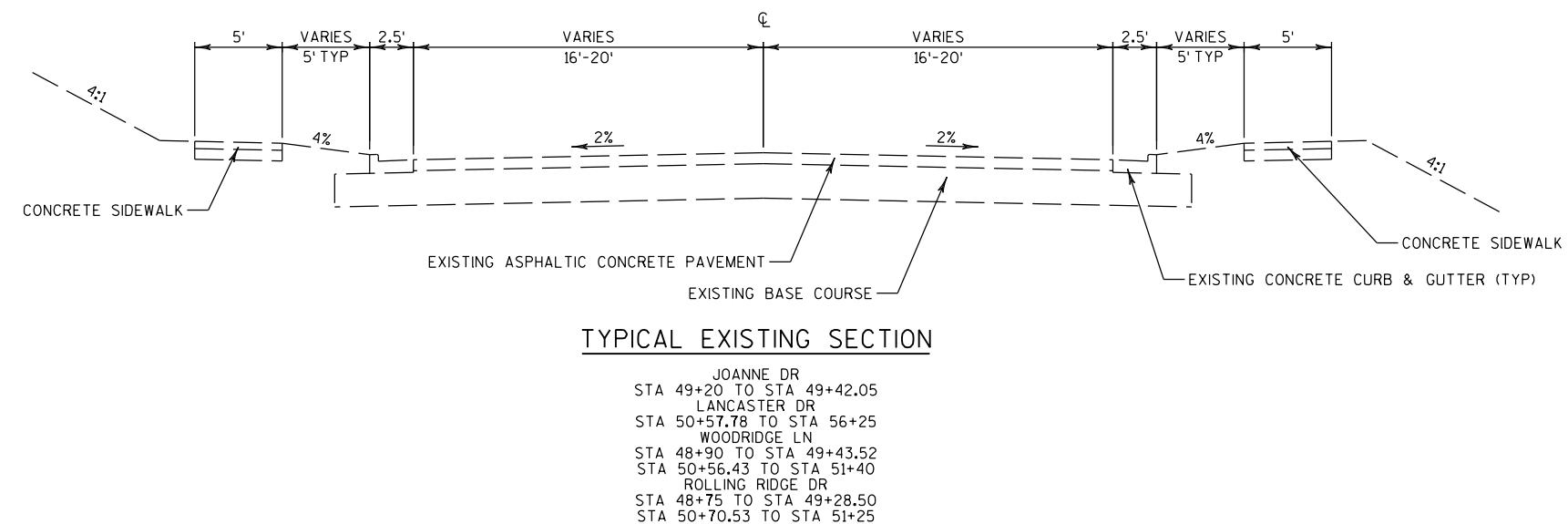
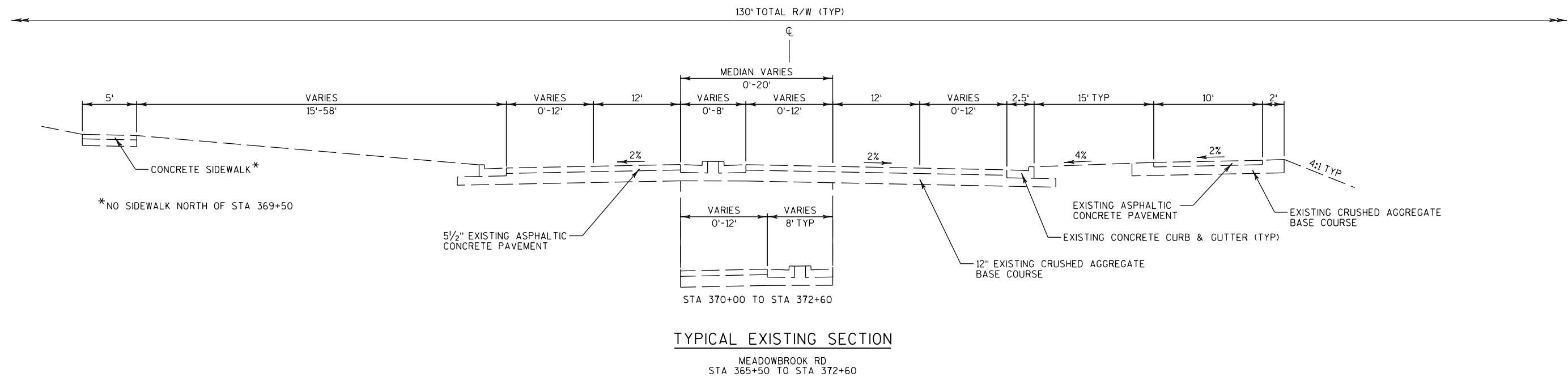
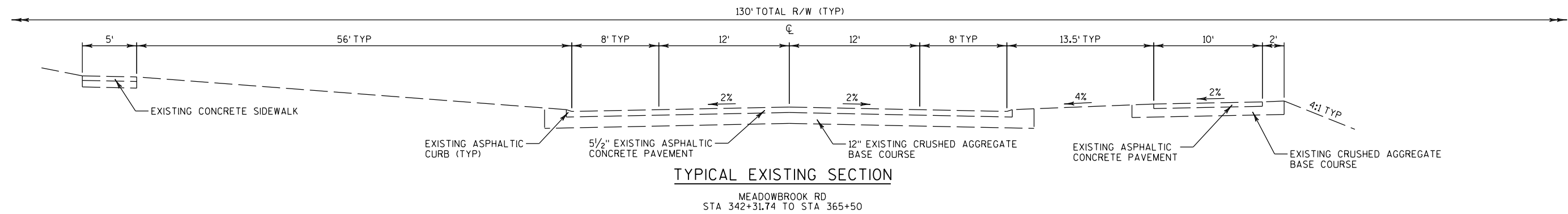
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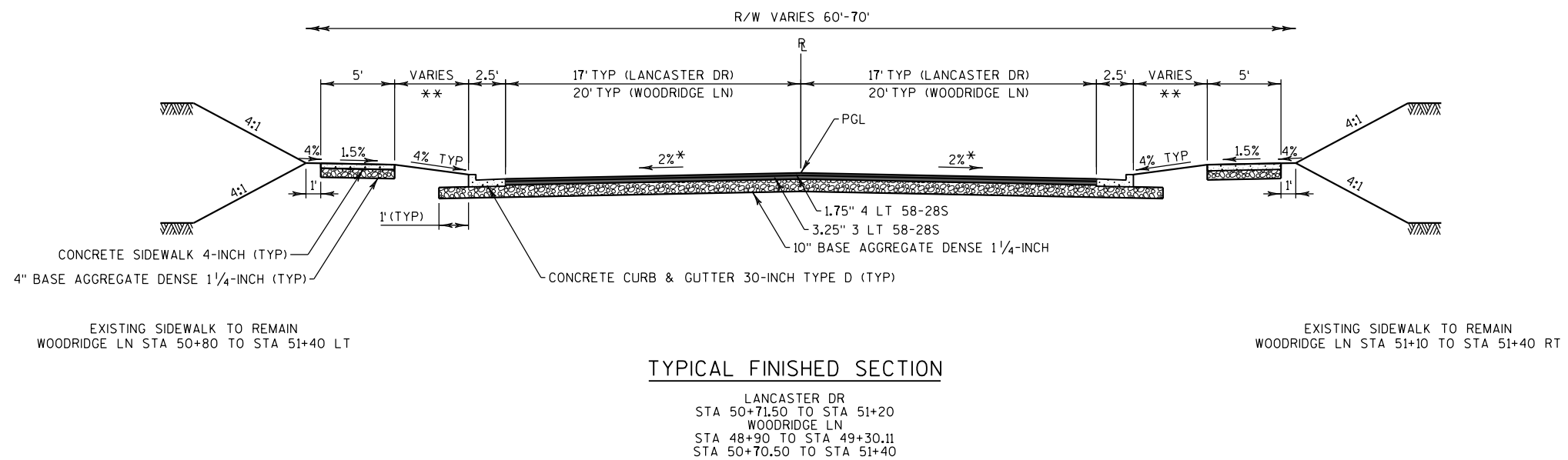
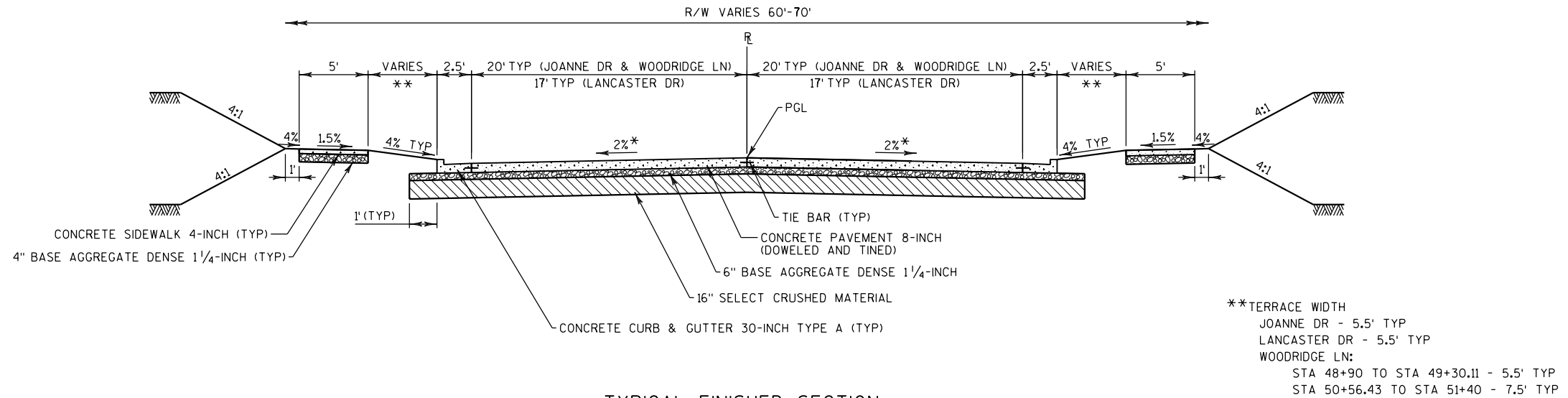


STANDARD ABBREVIATIONS <table><tr><td><</td><td>ANGLE</td><td>OBLIT</td><td>OBLITERATE</td></tr><tr><td>ADT</td><td>AVERAGE DAILY TRAFFIC</td><td>OD</td><td>OUTSIDE DIAMETER</td></tr><tr><td>AC</td><td>ACRE</td><td>PC</td><td>POINT OF CURVATURE</td></tr><tr><td>AE, AEW</td><td>APRON ENDWALL</td><td>PCC</td><td>POINT OF COMPOUND CURVE</td></tr><tr><td>AGG</td><td>AGGREGATE</td><td>PE</td><td>PRIVATE ENTRANCE</td></tr><tr><td>AH</td><td>AHEAD</td><td>PGL</td><td>PROFILE GRADE LINE</td></tr><tr><td>ASPH</td><td>ASPHALTIC</td><td>PI</td><td>POINT OF INTERSECTION</td></tr><tr><td>BC</td><td>BACK OF CURB</td><td>PL</td><td>PROPERTY LINE</td></tr><tr><td>BF</td><td>BACK FACE</td><td>PLE</td><td>PERMANENT LIMITED EASEMENT</td></tr><tr><td>BIT</td><td>EXISTING BITUMINOUS</td><td>PRC</td><td>POINT OF REVERSE CURVE</td></tr><tr><td>BM</td><td>BENCH MARK</td><td>PROJ</td><td>PROJECT</td></tr><tr><td>BEG</td><td>BEGIN</td><td>PSI</td><td>POUNDS PER SQUARE INCH</td></tr><tr><td>BK</td><td>BACK</td><td>PT</td><td>POINT OF TANGENCY</td></tr><tr><td>C & G</td><td>CURB AND GUTTER</td><td>PVC</td><td>POLYVINYL CHLORIDE</td></tr><tr><td>CABC</td><td>CRUSHED AGGREGATE BASE COURSE</td><td>PT</td><td>POINT OF TANGENCY</td></tr><tr><td>CB</td><td>CATCH BASIN</td><td>PAV'T</td><td>PAVEMENT</td></tr><tr><td>CMCP</td><td>CORRUGATED METAL CULVERT PIPE</td><td>PCC</td><td>PORTLAND CEMENT CONCRETE</td></tr><tr><td>CMP</td><td>CORRUGATED METAL PIPE</td><td>R</td><td>RADIUS OR RANGE</td></tr><tr><td>CP</td><td>CULVERT PIPE</td><td>RCCP</td><td>REINFORCED CONCRETE CULVERT PIPE</td></tr><tr><td>CY</td><td>CUBIC YARD</td><td>RCHSCP</td><td>REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CULVERT PIPE</td></tr><tr><td>CL OR C/L</td><td>CENTER LINE</td><td>RCPSS</td><td>REINFORCED CONCRETE PIPE STORM SEWER</td></tr><tr><td>CO</td><td>COUNTY</td><td>RHF</td><td>RIGHT HAND FORWARD</td></tr><tr><td>CONC</td><td>CONCRETE</td><td>R/L</td><td>REFERENCE LINE</td></tr><tr><td>CONST</td><td>CONSTRUCTION</td><td>R/W</td><td>RIGHT OF WAY</td></tr><tr><td>CR</td><td>CREEK</td><td>RD</td><td>ROAD</td></tr><tr><td>CTH</td><td>COUNTY TRUNK HIGHWAY</td><td>RDWY</td><td>ROADWAY</td></tr><tr><td>CWT</td><td>HUNDRED WEIGHT</td><td>REL</td><td>RELOCATE</td></tr><tr><td>D</td><td>DEGREE OF CURVE</td><td>REM</td><td>REMAINING</td></tr><tr><td>DHV</td><td>DESIGN HOUR VOLUME</td><td>REQD</td><td>REQUIRED</td></tr><tr><td>DIA</td><td>DIAMETER</td><td>RT</td><td>RIGHT</td></tr><tr><td>DISCH</td><td>DISCHARGE</td><td>RW</td><td>RETAINING WALL</td></tr><tr><td>E</td><td>EAST</td><td>S</td><td>SOUTH</td></tr><tr><td>EA</td><td>EACH</td><td>SALV</td><td>SALVAGED</td></tr><tr><td>EB</td><td>EASTBOUND</td><td>SAN</td><td>SANITARY</td></tr><tr><td>EBS</td><td>EXCAVATION BELOW SUBGRADE</td><td>SB</td><td>SOUTHBOUND</td></tr><tr><td>EL, ELEV</td><td>ELEVATION</td><td>SDD</td><td>STANDARD DETAIL DRAWINGS</td></tr><tr><td>ELEC</td><td>ELECTRIC(AL), ELEC CABLE</td><td>SE</td><td>SUPERELEVATION</td></tr><tr><td>EMB</td><td>EMBANKMENT</td><td>SEC</td><td>SECTION</td></tr><tr><td>ESALS</td><td>EQUIVALENT SINGLE AXEL LOADS</td><td>SF</td><td>SQUARE FOOT (FEET)</td></tr><tr><td>ESMT</td><td>EASEMENT</td><td>S/L</td><td>SURVEY LINE</td></tr><tr><td>EW</td><td>ENDWALL</td><td>SHLDR</td><td>SHOULDER(S)</td></tr><tr><td>EXC</td><td>EXCAVATION</td><td>SHR</td><td>SHRINKAGE</td></tr><tr><td>EXIST</td><td>EXISTING BITUMINOUS</td><td>SPECS</td><td>SPECIFICATIONS</td></tr><tr><td>EXP</td><td>EXPANSION</td><td>SS</td><td>STORM SEWER</td></tr><tr><td>FC</td><td>FACE OF CURB</td><td>STA</td><td>STATION</td></tr><tr><td>FE</td><td>FIELD ENTRANCE</td><td>STH</td><td>STATE TRUNK HIGHWAY</td></tr><tr><td>FF</td><td>FACE TO FACE</td><td>STR</td><td>STRUCTURE</td></tr><tr><td>F/L, FL</td><td>FLOW LINE</td><td>SW</td><td>SIDEWALK</td></tr><tr><td>FERT</td><td>FERTILIZER</td><td>SY</td><td>SQUARE YARD</td></tr><tr><td>FHWA</td><td>FEDERAL HIGHWAY</td><td>TAN</td><td>TANGENT</td></tr><tr><td>FT</td><td>FOOT (FEET)</td><td>TEL</td><td>TELEPHONE</td></tr><tr><td>G</td><td>GAS</td><td>T</td><td>(TRUCKS) PERCENT OF</td></tr><tr><td>GN</td><td>GRID NORTH</td><td>TC</td><td>TOP OF CURB</td></tr><tr><td>H</td><td>HOUSE</td><td>TAN</td><td>TANGENT</td></tr><tr><td>HP</td><td>HIGH POINT</td><td>TEMP</td><td>TEMPORARY</td></tr><tr><td>HR</td><td>HANDICAP RAMP</td><td>TL OR T/L</td><td>TRANSIT LINE</td></tr><tr><td>HYD</td><td>HYDRANT</td><td>TLE</td><td>TEMPORARY LIMITED EASEMENT</td></tr><tr><td>I</td><td>INTERSECTION ANGLE</td><td>TYP</td><td>TYPICAL</td></tr><tr><td>ID</td><td>INSIDE DIAMETER</td><td>UG</td><td>UNDERGROUND (CABLE)</td></tr><tr><td>INL</td><td>INLET</td><td>UNCL</td><td>UNCLASSIFIED</td></tr><tr><td>INTER</td><td>INTERSECTION</td><td>VAR</td><td>VARIABLE</td></tr><tr><td>INV</td><td>INVERT</td><td>VCL</td><td>VERTICAL CURVE LENGTH</td></tr><tr><td>IP</td><td>IRON PIPE</td><td>VPC</td><td>VERTICAL POINT OF CURVATURE</td></tr><tr><td>JT</td><td>JOINT</td><td>VPCC</td><td>VERTICAL POINT OF COMPOUND CURVE</td></tr><tr><td>K</td><td>RATE OF VERTICAL CURVATURE</td><td>VPI</td><td>VERTICAL POINT OF INTERSECTION</td></tr><tr><td>L</td><td>LENGTH OF CURVE</td><td>VPRC</td><td>VERTICAL POINT OF REVERSE CURVE</td></tr><tr><td>LB</td><td>POUND</td><td>VPT</td><td>VERTICAL POINT OF TANGENCY</td></tr><tr><td>LC</td><td>LONG CHORD OF CURVE</td><td>VLV</td><td>VALVE</td></tr><tr><td>LP</td><td>LOW POINT</td><td>VOL</td><td>VOLUME</td></tr><tr><td>LF</td><td>LINEAR FOOT(FEET)</td><td>W</td><td>WEST</td></tr><tr><td>LHF</td><td>LEFT HAND FORWARD</td><td>WB</td><td>WESTBOUND</td></tr><tr><td>LC</td><td>LONG CHORD</td><td>WV</td><td>WATER VALVE</td></tr><tr><td>LS</td><td>LUMP SUM</td><td>X</td><td>EASTING OR EAST GRID COORDINATE</td></tr><tr><td>LT</td><td>LEFT</td><td>Y</td><td>NORTHING OR NORTH GRID COORDINATE</td></tr><tr><td>M</td><td>MARSH</td><td>YD</td><td>YARD</td></tr><tr><td>MATL</td><td>MATERIAL</td><td></td><td></td></tr><tr><td>MP</td><td>MARKER POST</td><td></td><td></td></tr><tr><td>MAX</td><td>MAXIMUM</td><td></td><td></td></tr><tr><td>MGAL</td><td>1000 GALLONS</td><td></td><td></td></tr><tr><td>MH</td><td>MANHOLE</td><td></td><td></td></tr><tr><td>MIN</td><td>MINIMUM</td><td></td><td></td></tr><tr><td>ML OR M/L</td><td>MATCH LINE</td><td></td><td></td></tr><tr><td>N</td><td>NORTH</td><td></td><td></td></tr><tr><td>NB</td><td>NORTHBOUND</td><td></td><td></td></tr><tr><td>NC</td><td>NORMAL CROWN OR NO CHANGE</td><td></td><td></td></tr><tr><td>NO</td><td>NUMBER</td><td></td><td></td></tr><tr><td>NW OR N/W</td><td>NORMAL WATER</td><td></td><td></td></tr></table>				<	ANGLE	OBLIT	OBLITERATE	ADT	AVERAGE DAILY TRAFFIC	OD	OUTSIDE DIAMETER	AC	ACRE	PC	POINT OF CURVATURE	AE, AEW	APRON ENDWALL	PCC	POINT OF COMPOUND CURVE	AGG	AGGREGATE	PE	PRIVATE ENTRANCE	AH	AHEAD	PGL	PROFILE GRADE LINE	ASPH	ASPHALTIC	PI	POINT OF INTERSECTION	BC	BACK OF CURB	PL	PROPERTY LINE	BF	BACK FACE	PLE	PERMANENT LIMITED EASEMENT	BIT	EXISTING BITUMINOUS	PRC	POINT OF REVERSE CURVE	BM	BENCH MARK	PROJ	PROJECT	BEG	BEGIN	PSI	POUNDS PER SQUARE INCH	BK	BACK	PT	POINT OF TANGENCY	C & G	CURB AND GUTTER	PVC	POLYVINYL CHLORIDE	CABC	CRUSHED AGGREGATE BASE COURSE	PT	POINT OF TANGENCY	CB	CATCH BASIN	PAV'T	PAVEMENT	CMCP	CORRUGATED METAL CULVERT PIPE	PCC	PORTLAND CEMENT CONCRETE	CMP	CORRUGATED METAL PIPE	R	RADIUS OR RANGE	CP	CULVERT PIPE	RCCP	REINFORCED CONCRETE CULVERT PIPE	CY	CUBIC YARD	RCHSCP	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CULVERT PIPE	CL OR C/L	CENTER LINE	RCPSS	REINFORCED CONCRETE PIPE STORM SEWER	CO	COUNTY	RHF	RIGHT HAND FORWARD	CONC	CONCRETE	R/L	REFERENCE LINE	CONST	CONSTRUCTION	R/W	RIGHT OF WAY	CR	CREEK	RD	ROAD	CTH	COUNTY TRUNK HIGHWAY	RDWY	ROADWAY	CWT	HUNDRED WEIGHT	REL	RELOCATE	D	DEGREE OF CURVE	REM	REMAINING	DHV	DESIGN HOUR VOLUME	REQD	REQUIRED	DIA	DIAMETER	RT	RIGHT	DISCH	DISCHARGE	RW	RETAINING WALL	E	EAST	S	SOUTH	EA	EACH	SALV	SALVAGED	EB	EASTBOUND	SAN	SANITARY	EBS	EXCAVATION BELOW SUBGRADE	SB	SOUTHBOUND	EL, ELEV	ELEVATION	SDD	STANDARD DETAIL DRAWINGS	ELEC	ELECTRIC(AL), ELEC CABLE	SE	SUPERELEVATION	EMB	EMBANKMENT	SEC	SECTION	ESALS	EQUIVALENT SINGLE AXEL LOADS	SF	SQUARE FOOT (FEET)	ESMT	EASEMENT	S/L	SURVEY LINE	EW	ENDWALL	SHLDR	SHOULDER(S)	EXC	EXCAVATION	SHR	SHRINKAGE	EXIST	EXISTING BITUMINOUS	SPECS	SPECIFICATIONS	EXP	EXPANSION	SS	STORM SEWER	FC	FACE OF CURB	STA	STATION	FE	FIELD ENTRANCE	STH	STATE TRUNK HIGHWAY	FF	FACE TO FACE	STR	STRUCTURE	F/L, FL	FLOW LINE	SW	SIDEWALK	FERT	FERTILIZER	SY	SQUARE YARD	FHWA	FEDERAL HIGHWAY	TAN	TANGENT	FT	FOOT (FEET)	TEL	TELEPHONE	G	GAS	T	(TRUCKS) PERCENT OF	GN	GRID NORTH	TC	TOP OF CURB	H	HOUSE	TAN	TANGENT	HP	HIGH POINT	TEMP	TEMPORARY	HR	HANDICAP RAMP	TL OR T/L	TRANSIT LINE	HYD	HYDRANT	TLE	TEMPORARY LIMITED EASEMENT	I	INTERSECTION ANGLE	TYP	TYPICAL	ID	INSIDE DIAMETER	UG	UNDERGROUND (CABLE)	INL	INLET	UNCL	UNCLASSIFIED	INTER	INTERSECTION	VAR	VARIABLE	INV	INVERT	VCL	VERTICAL CURVE LENGTH	IP	IRON PIPE	VPC	VERTICAL POINT OF CURVATURE	JT	JOINT	VPCC	VERTICAL POINT OF COMPOUND CURVE	K	RATE OF VERTICAL CURVATURE	VPI	VERTICAL POINT OF INTERSECTION	L	LENGTH OF CURVE	VPRC	VERTICAL POINT OF REVERSE CURVE	LB	POUND	VPT	VERTICAL POINT OF TANGENCY	LC	LONG CHORD OF CURVE	VLV	VALVE	LP	LOW POINT	VOL	VOLUME	LF	LINEAR FOOT(FEET)	W	WEST	LHF	LEFT HAND FORWARD	WB	WESTBOUND	LC	LONG CHORD	WV	WATER VALVE	LS	LUMP SUM	X	EASTING OR EAST GRID COORDINATE	LT	LEFT	Y	NORTHING OR NORTH GRID COORDINATE	M	MARSH	YD	YARD	MATL	MATERIAL			MP	MARKER POST			MAX	MAXIMUM			MGAL	1000 GALLONS			MH	MANHOLE			MIN	MINIMUM			ML OR M/L	MATCH LINE			N	NORTH			NB	NORTHBOUND			NC	NORMAL CROWN OR NO CHANGE			NO	NUMBER			NW OR N/W	NORMAL WATER			DESIGN INDEX GENERAL NOTES, UTILITY CONTACTS & STANDARD ABBREVIATIONS PROJECT OVERVIEW TYPICAL SECTIONS CONSTRUCTION DETAILS REMOVAL PLAN PLAN DETAILS 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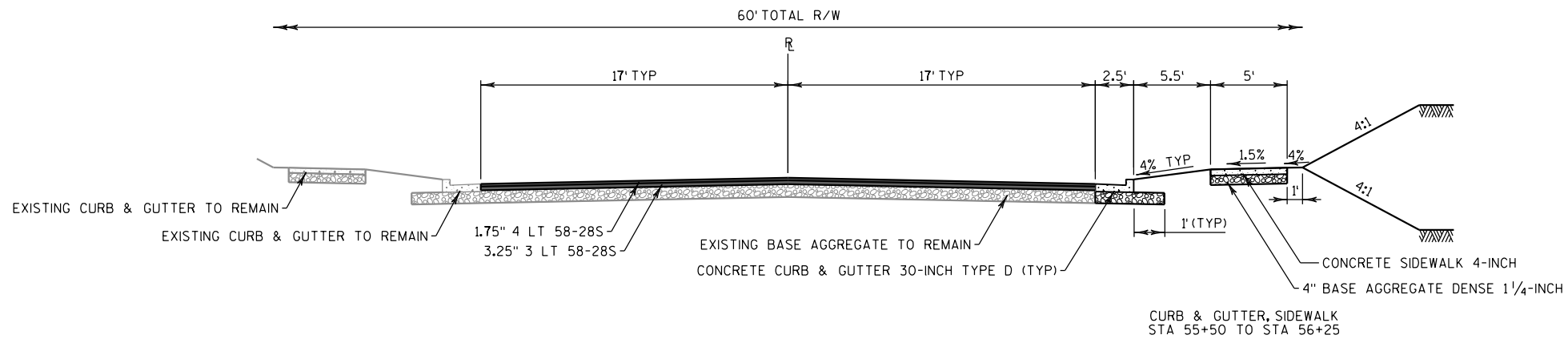
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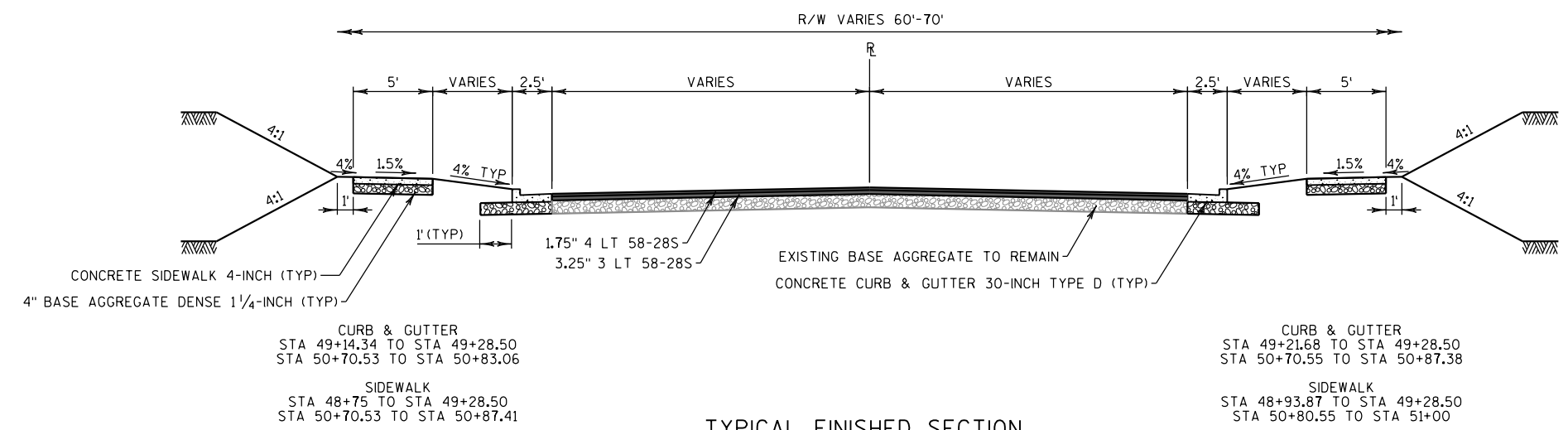




* CROSS SLOPE VARIES - SEE PAVING GRADE SHEETS

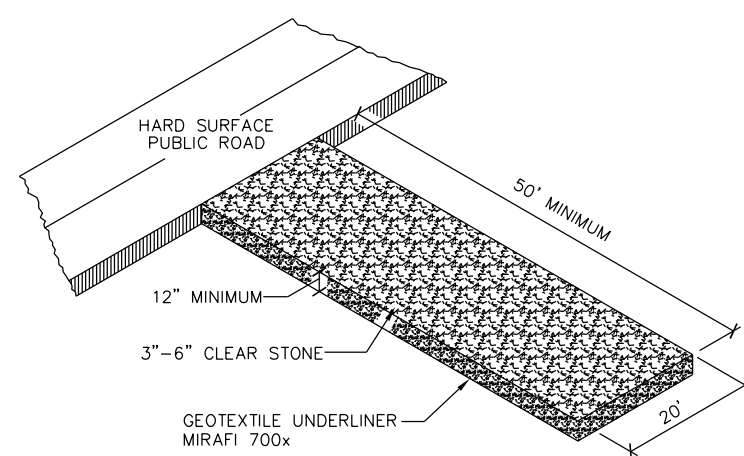


TYPICAL FINISHED SECTION
 LANCASTER DR
 STA 51+20 TO STA 56+25



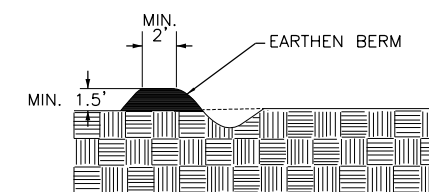
TYPICAL FINISHED SECTION
 ROLLING RIDGE DR
 STA 48+75 TO STA 49+28.50
 STA 50+70.53 TO STA 51+25

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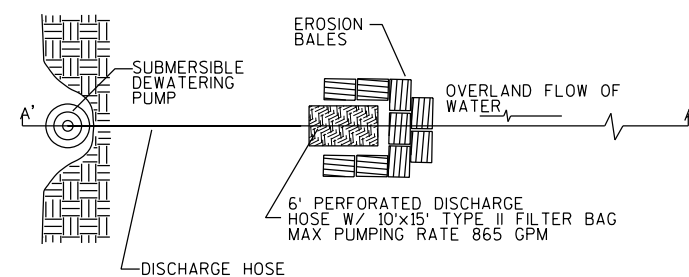
CRUSHED STONE CONSTRUCTION ENTRANCE

N.T.S.

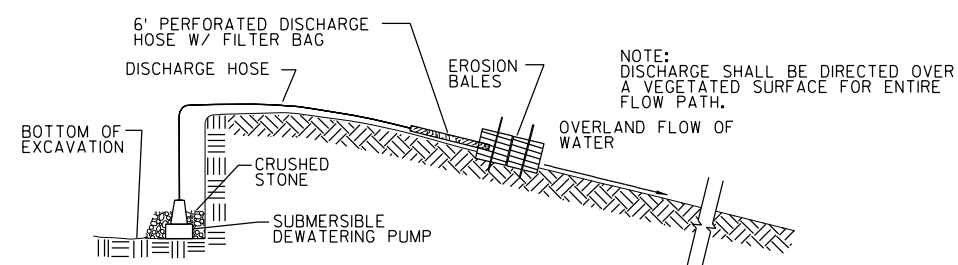


DIVERSION DITCH

N.T.S.

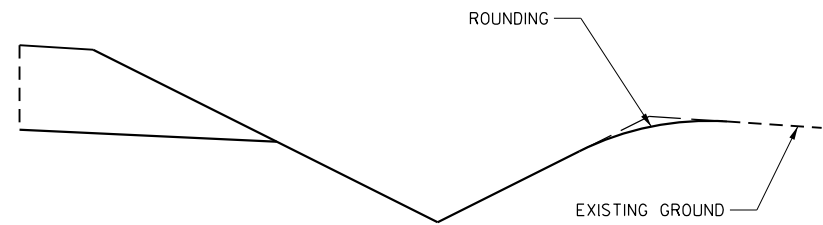


PLAN

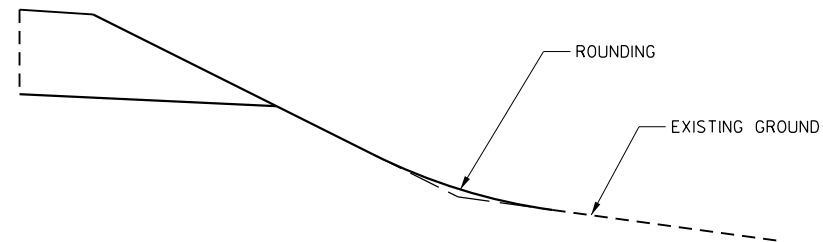


DEWATERING SEDIMENT CONTROL

N.T.S.

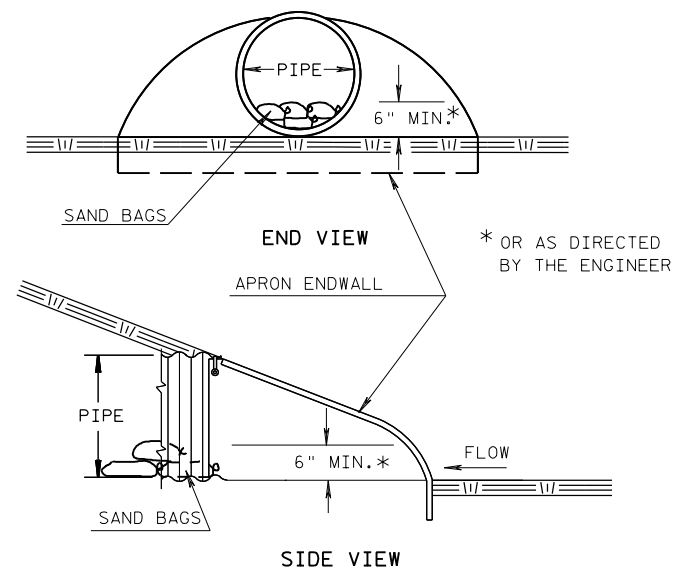


IN CUT



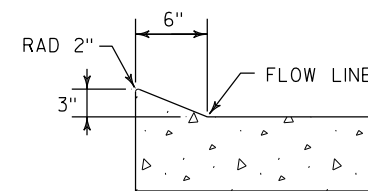
IN FILL

SLOPE ROUNDING DETAIL

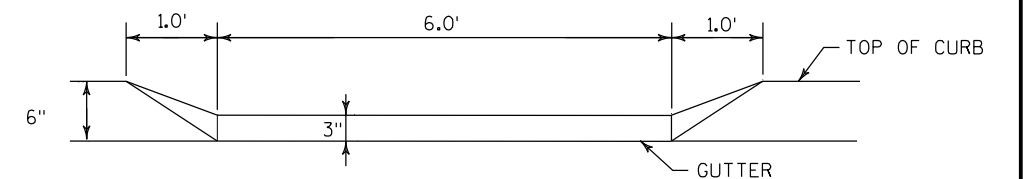


CULVERT PIPE CHECK

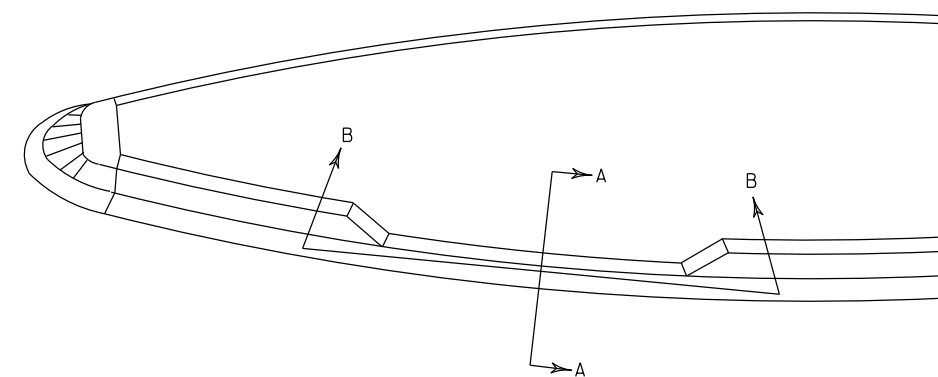
SEE EROSION CONTROL PLAN FOR LOCATIONS



SECTION A-A



SECTION B-B

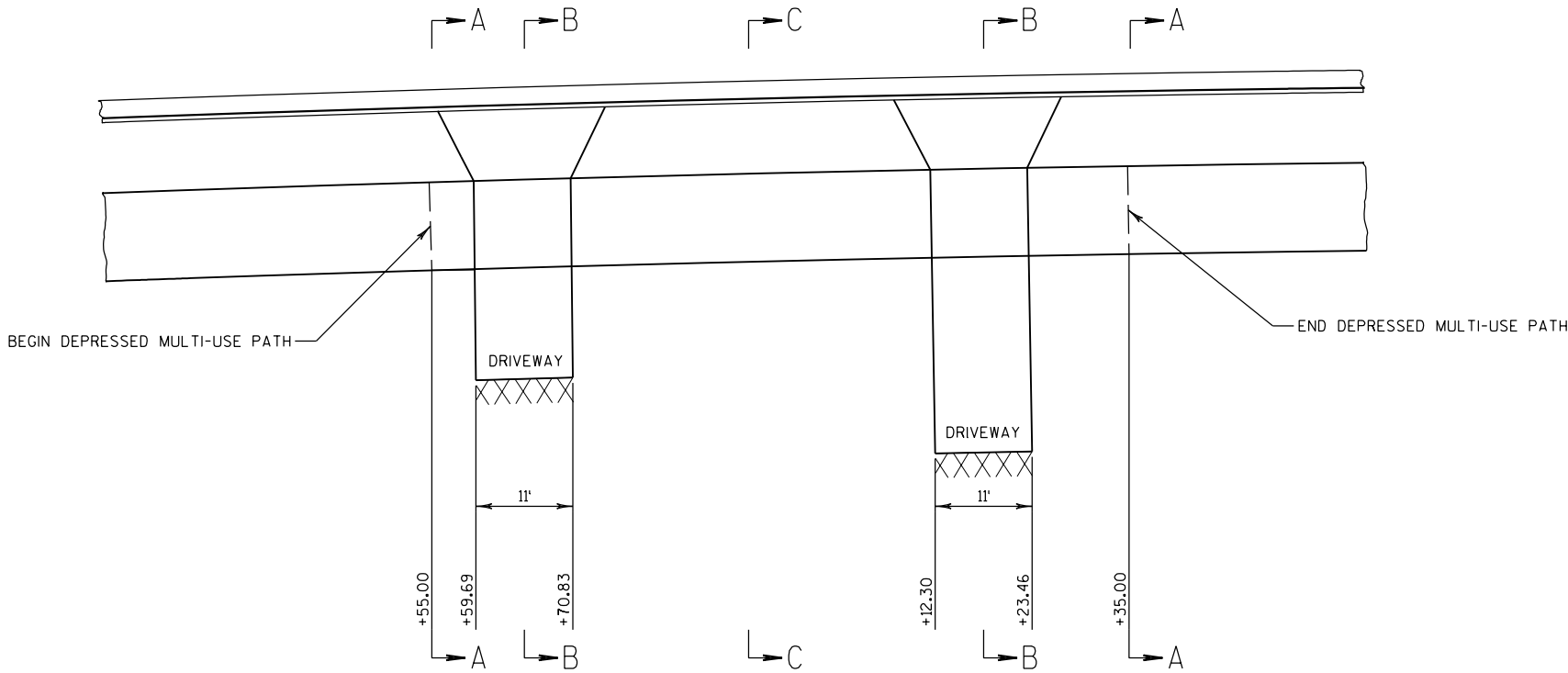


MAINTENANCE RAMP

INSTALL AS DIRECTED BY ENGINEER

LEGEND

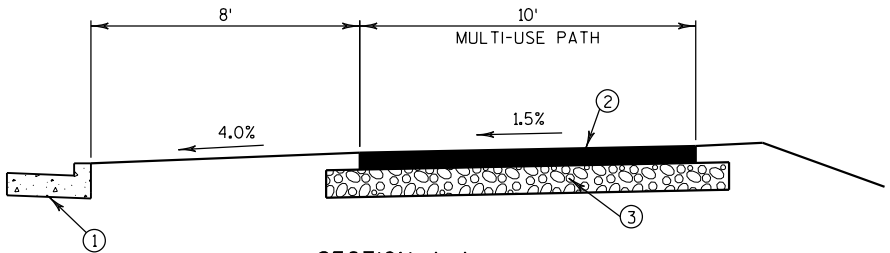
- ① CONCRETE CURB & GUTTER 30-INCH TYPE A
- ② 4" ASPHALTIC SURFACE
- ③ 6" BASE AGGREGATE DENSE 1 1/4-INCH
- ④ 4" BASE AGGREGATE DENSE 1 1/4-INCH
- ⑤ CONCRETE DRIVEWAY 6-INCH
- ⑥ 4" ASPHALTIC SURFACE DRIVEWAY



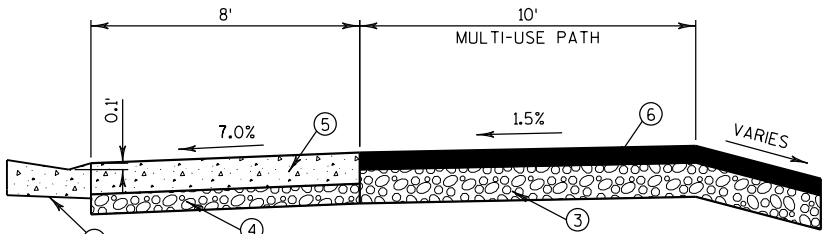
PLAN VIEW

NOTE: LONGITUDINAL SLOPE ALONG MULTI-USE PATH NOT TO EXCEED 5%

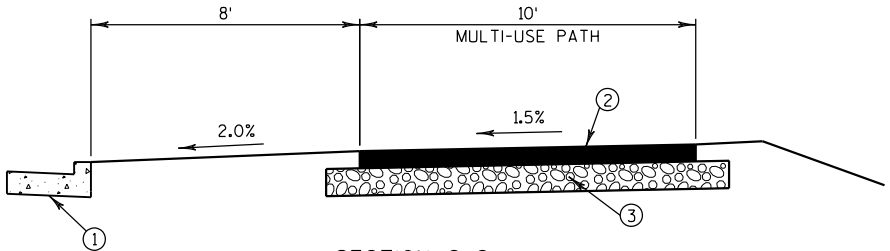
DEPRESSED MULTI-USE PATH DETAIL
SEE PLAN DETAILS FOR LOCATIONS



SECTION A-A
NTS

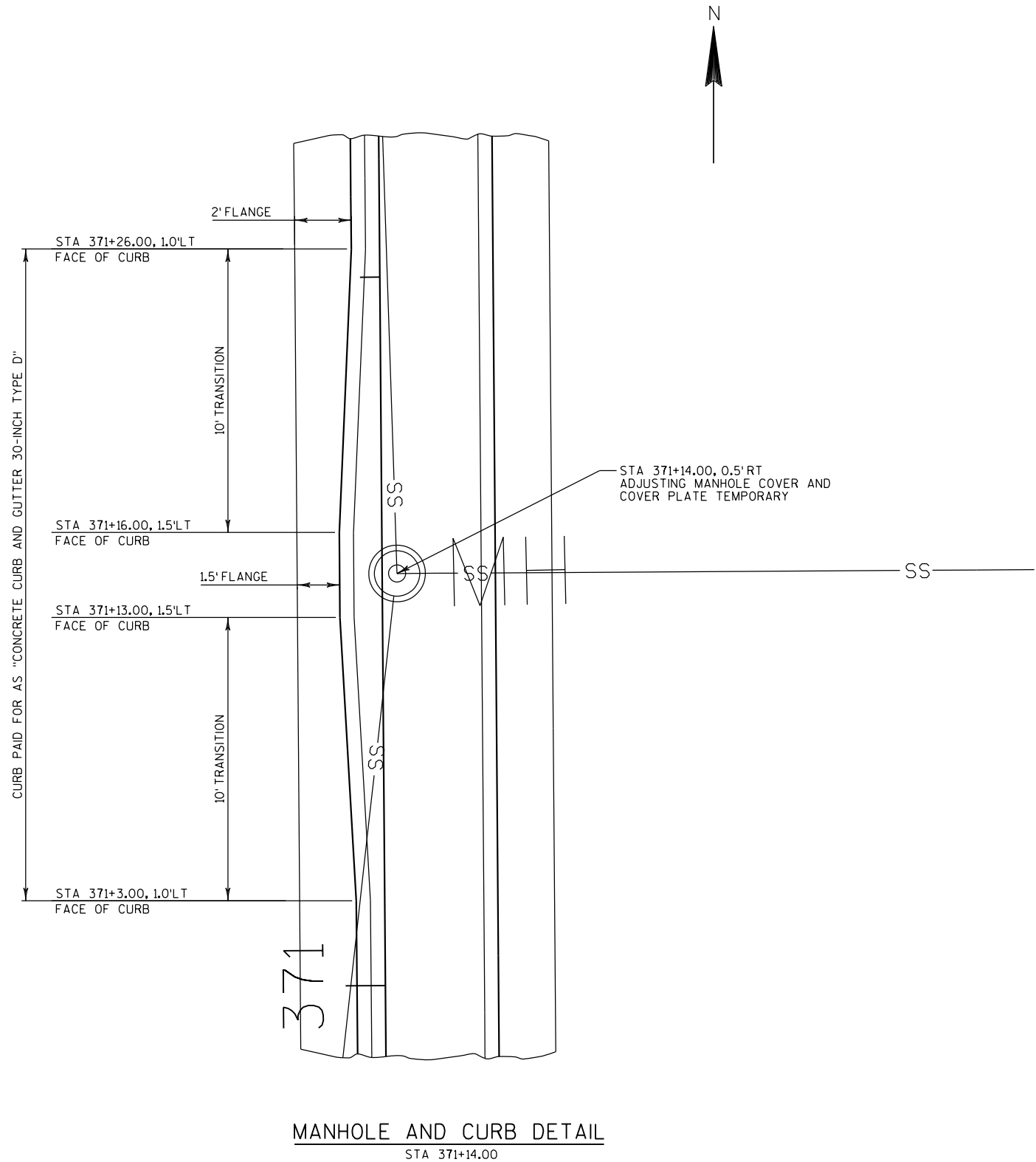


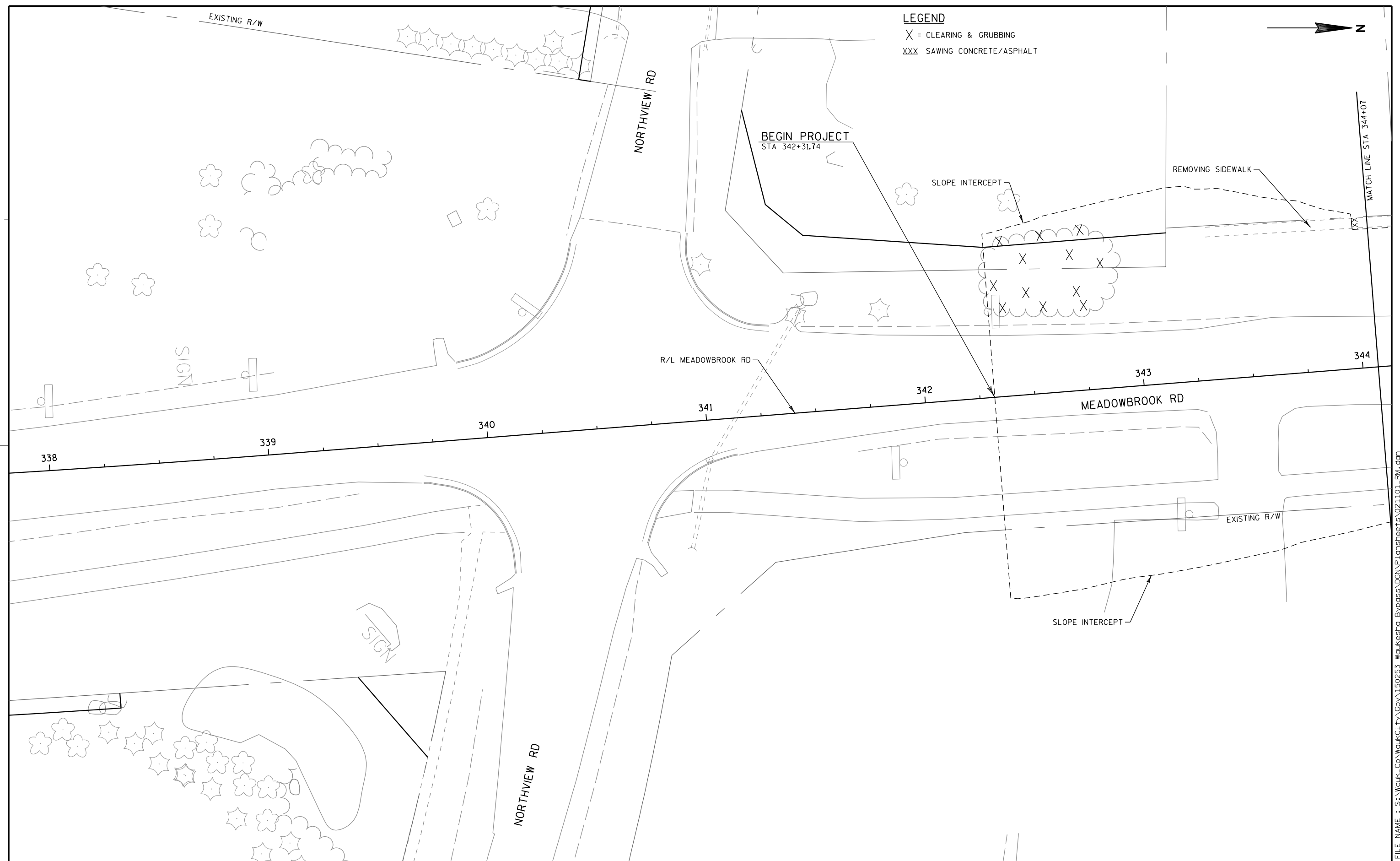
SECTION B-B
NTS

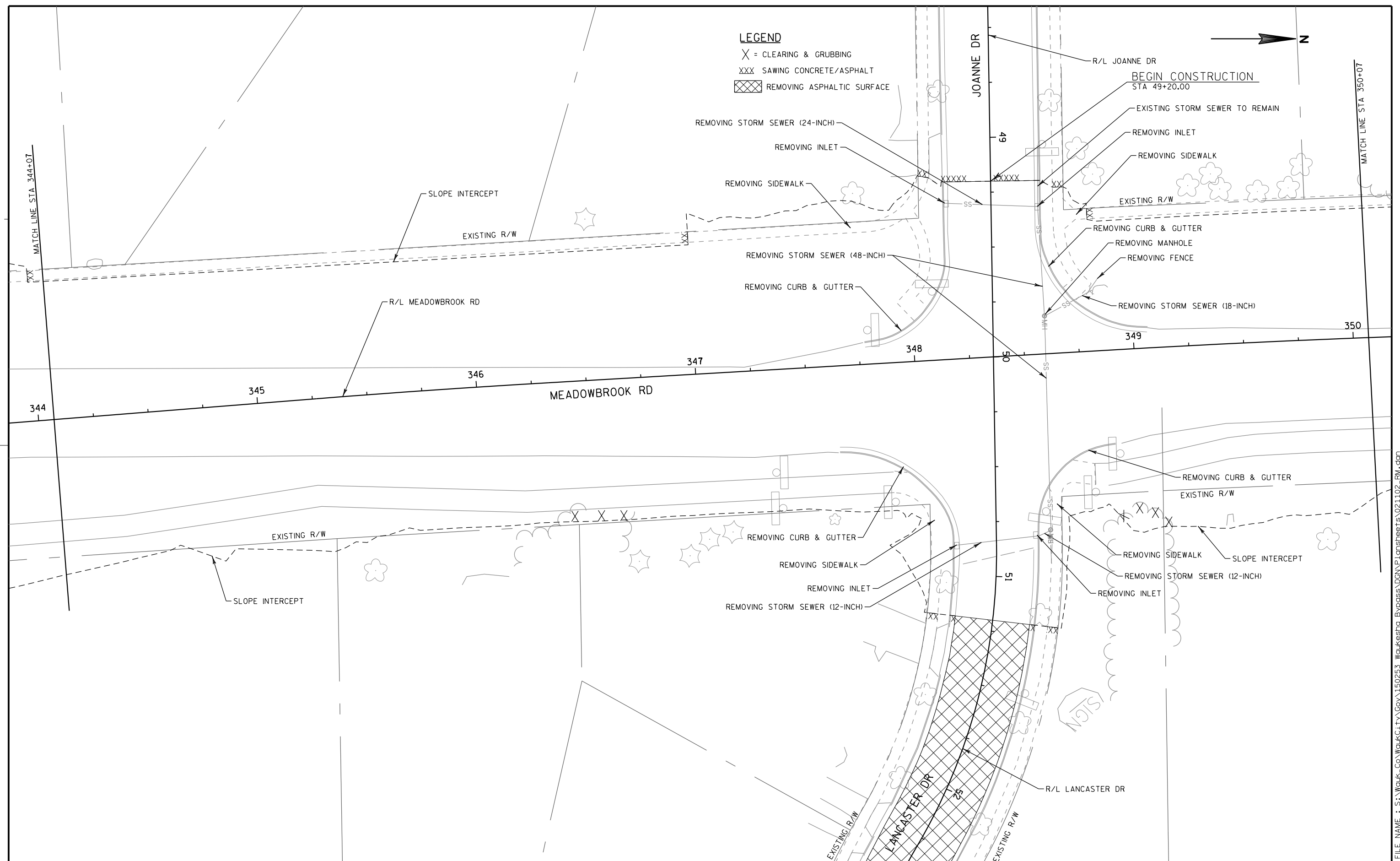


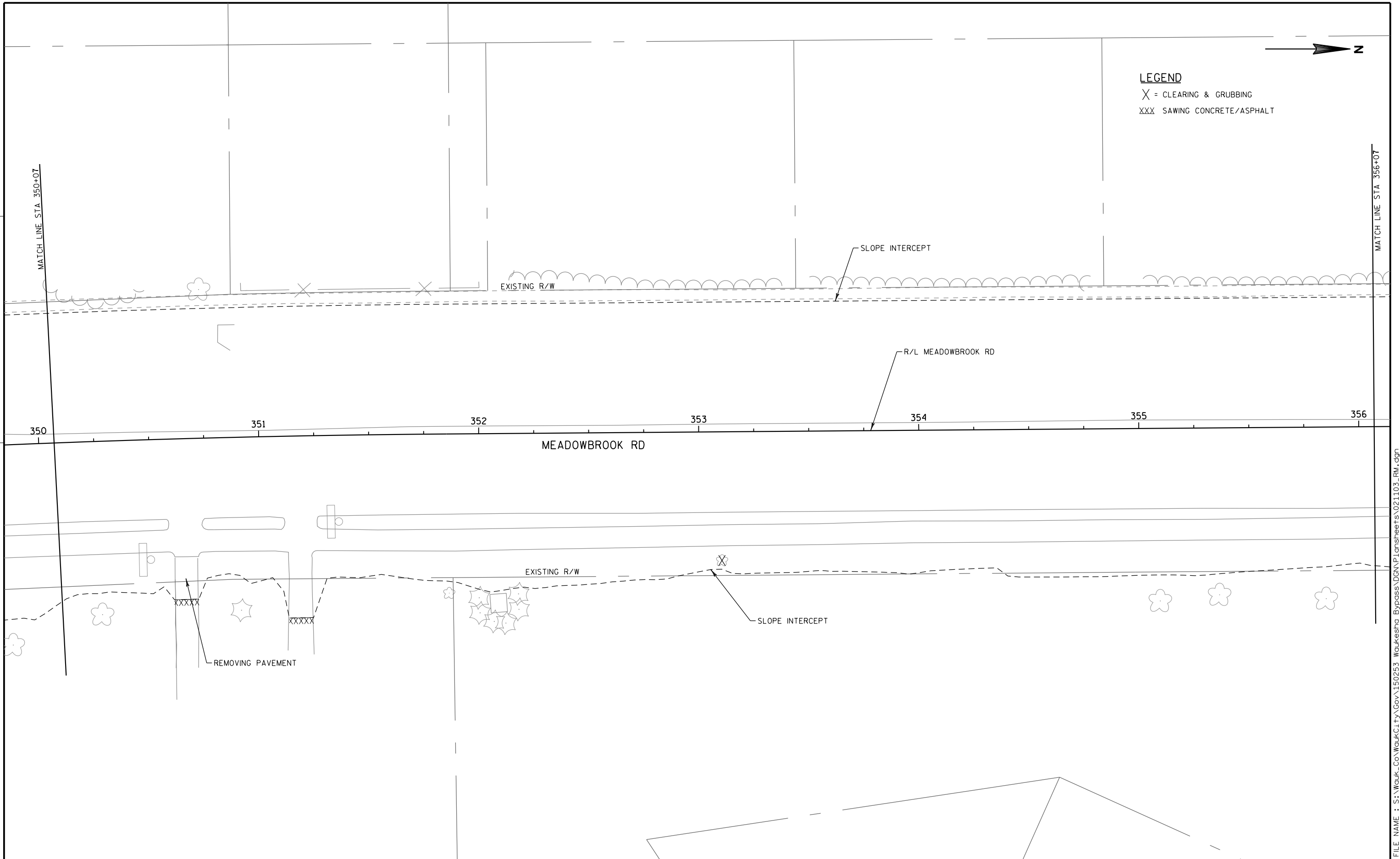
SECTION C-C
NTS

- NOTES:
- 1) REMOVAL, STORAGE AND REINSTALLATION OF MANHOLE COVER SHALL BE INCIDENTAL TO BID ITEM "ADJUSTING MANHOLE COVERS".
 - 2) COVER PLATE TEMPORARY TO BE INSTALLED PRIOR TO TEMPORARY PAVEMENT OPTIONS.
 - 3) COORDINATE WITH CITY OF WAUKESHA MUNICIPAL GARAGE TO HAVE MAINLINE SANITARY SEWER FLUSHED IMMEDIATELY PRIOR TO PLATING







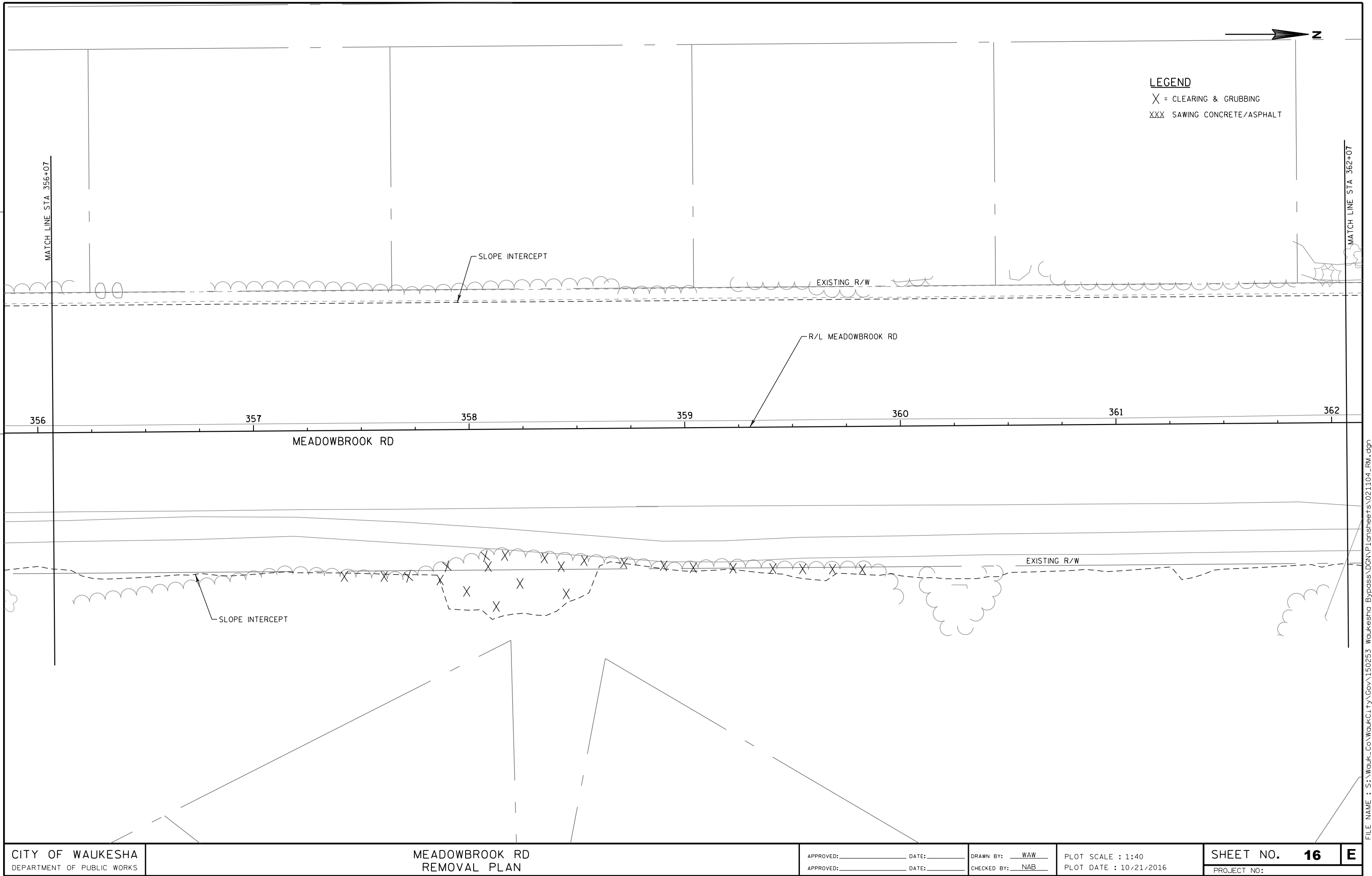


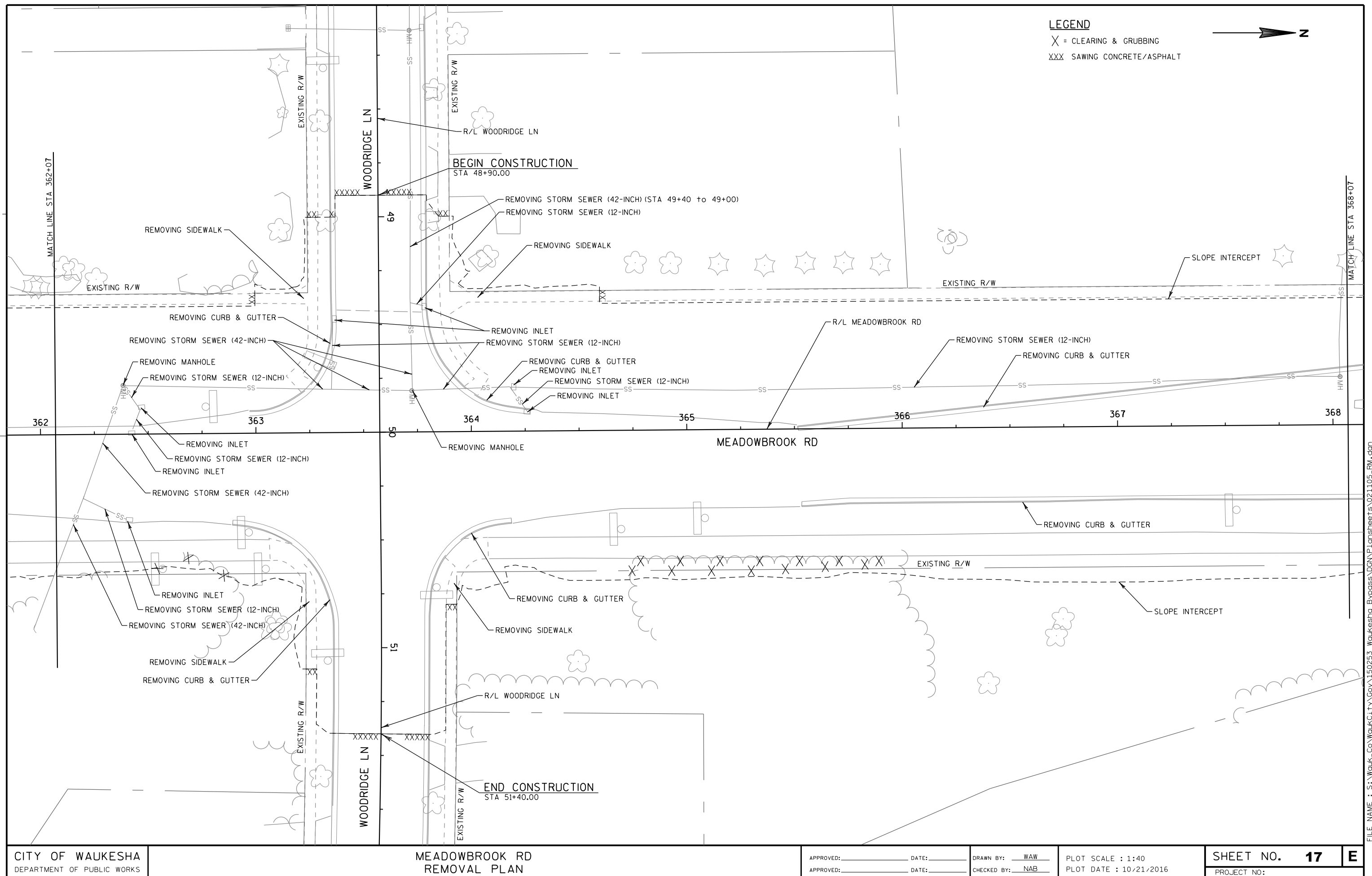
LEGEND

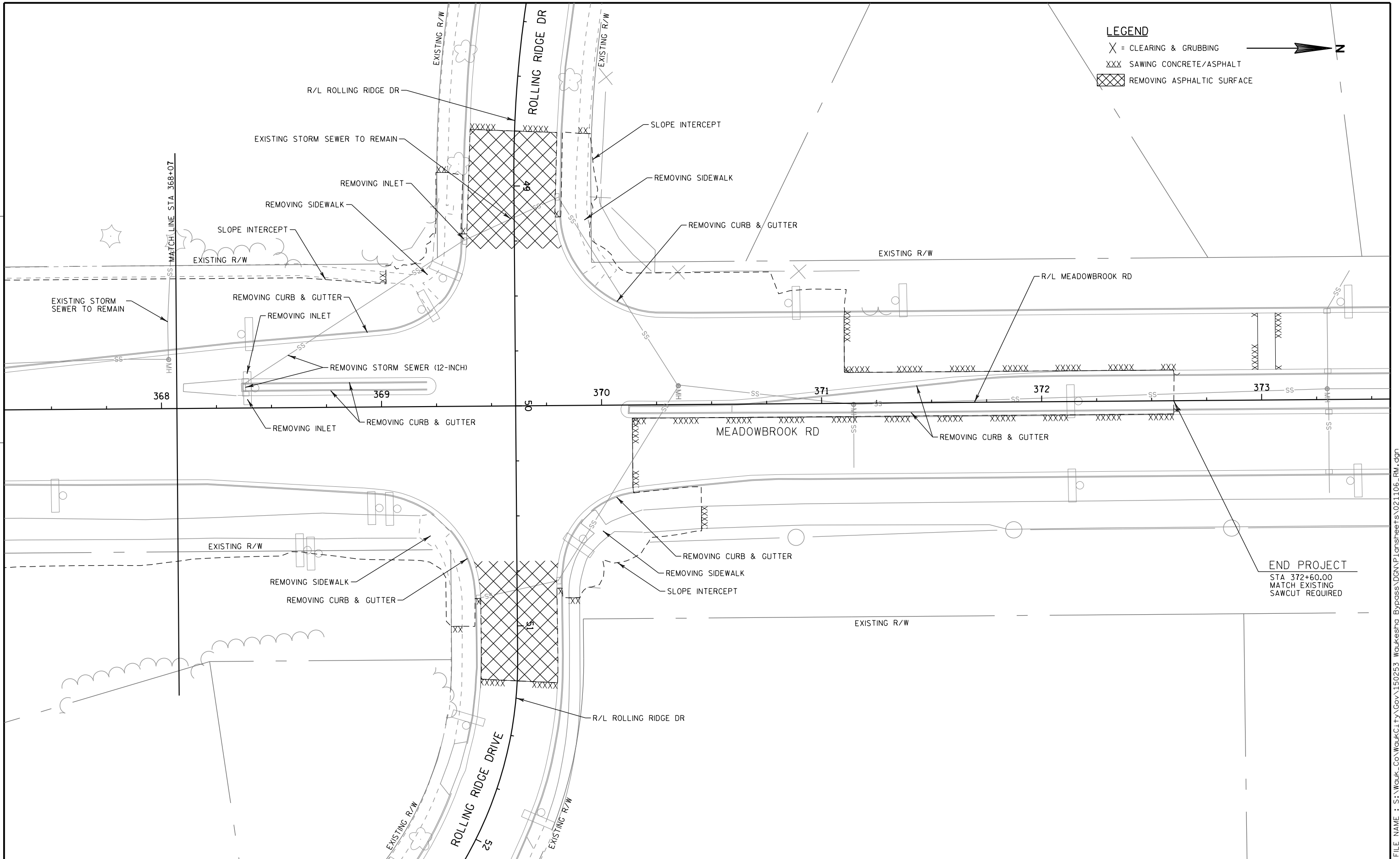
- X = CLEARING & GRUBBING
- XXX SAWING CONCRETE/ASPHALT



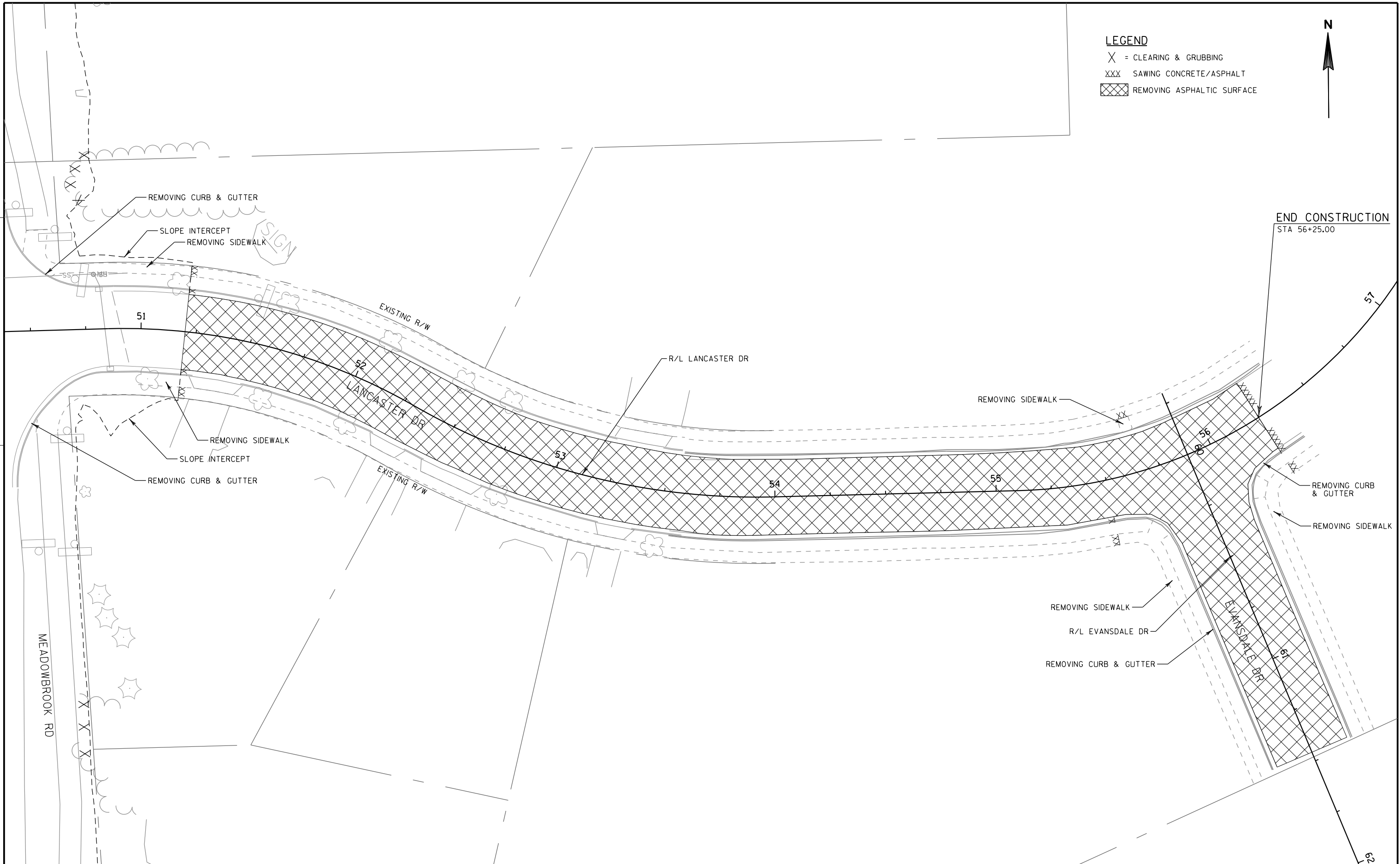
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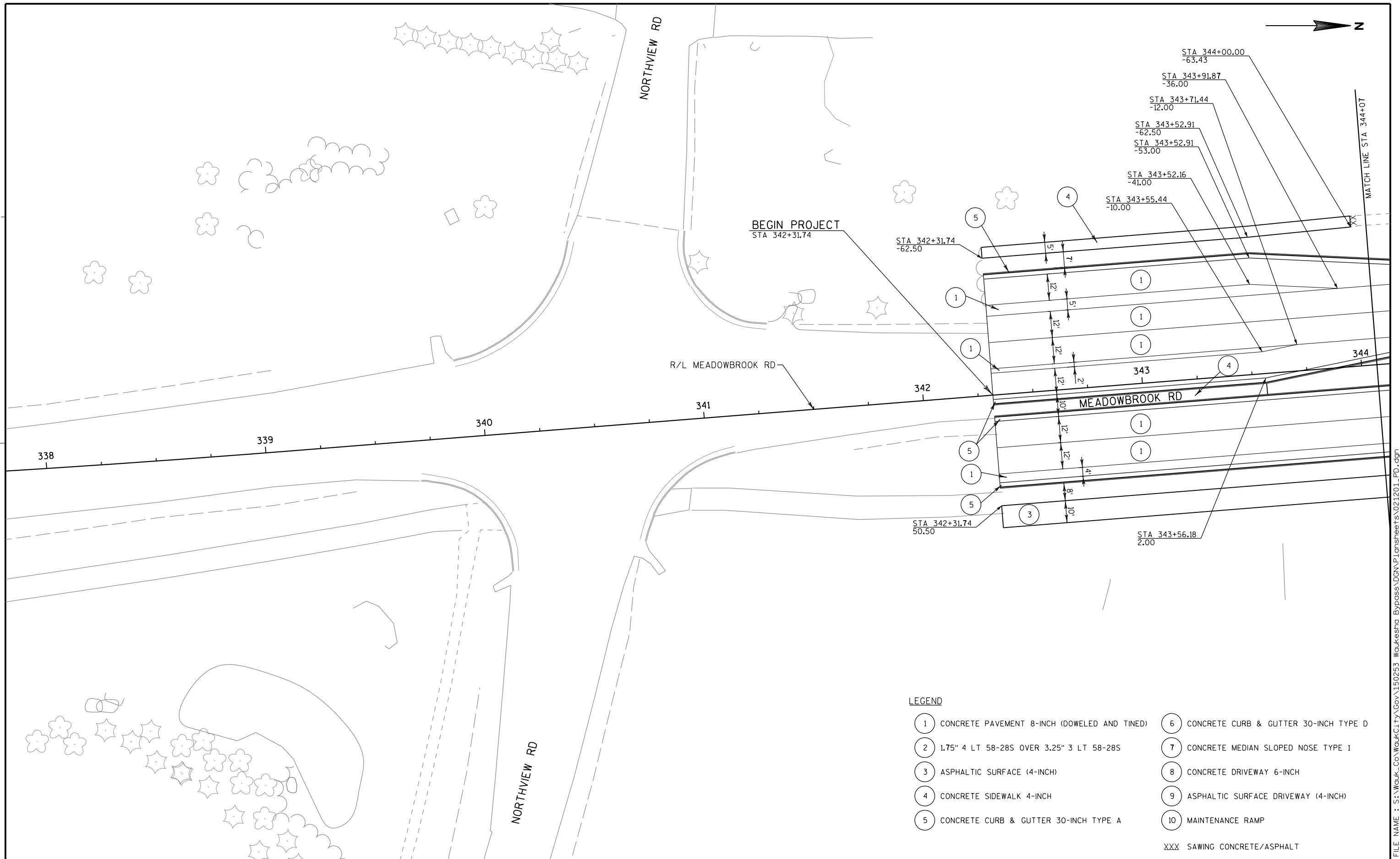
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- LEGEND**
- X = CLEARING & GRUBBING
 - XXX SAWING CONCRETE/ASPHALT
 - REMOVING ASPHALTIC SURFACE



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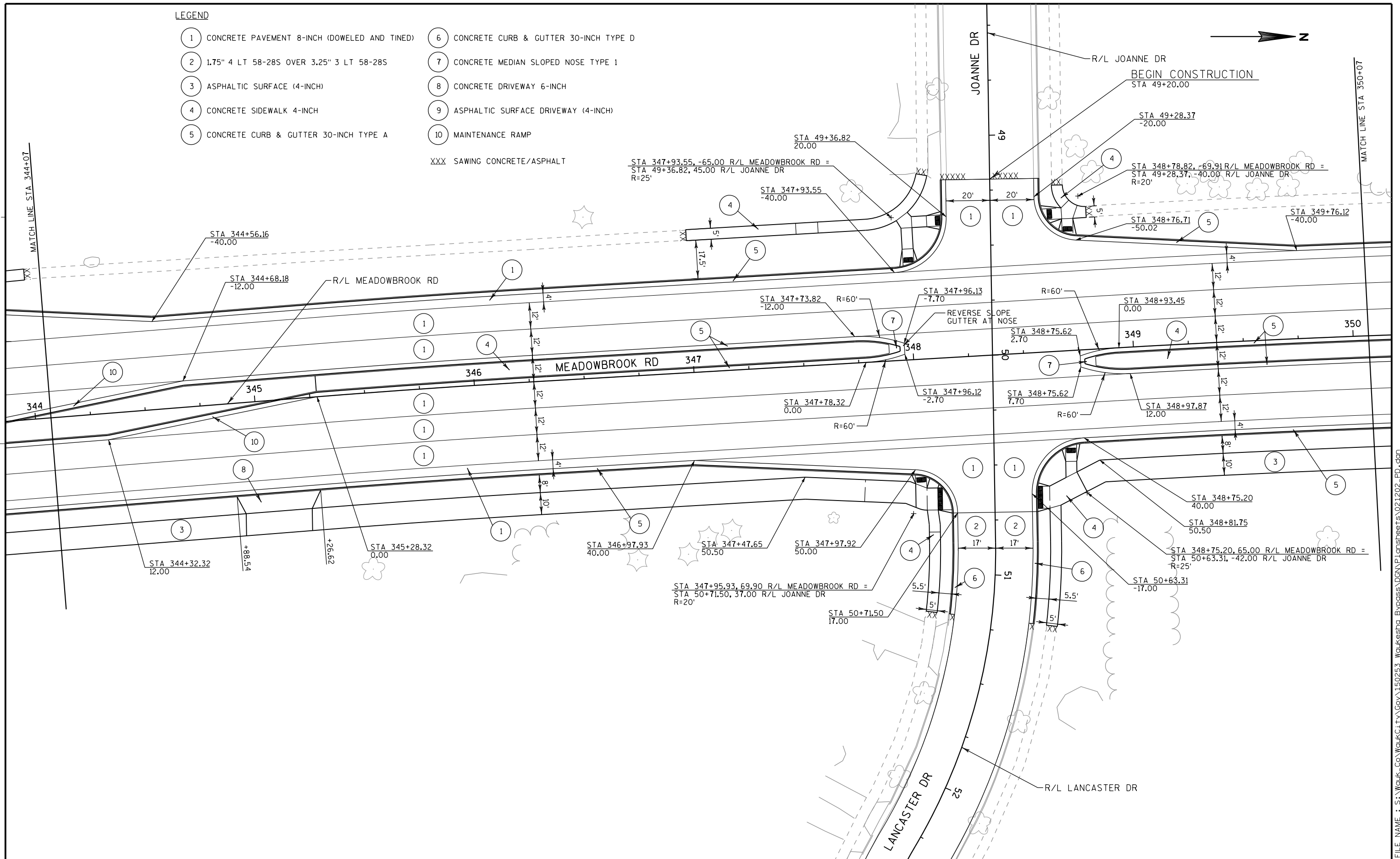


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LEGEND

- | | |
|--|---|
| 1 CONCRETE PAVEMENT 8-INCH (DOWELED AND TINED) | 6 CONCRETE CURB & GUTTER 30-INCH TYPE D |
| 2 1.75" 4 LT 58-28S OVER 3.25" 3 LT 58-28S | 7 CONCRETE MEDIAN SLOPED NOSE TYPE 1 |
| 3 ASPHALTIC SURFACE (4-INCH) | 8 CONCRETE DRIVEWAY 6-INCH |
| 4 CONCRETE SIDEWALK 4-INCH | 9 ASPHALTIC SURFACE DRIVEWAY (4-INCH) |
| 5 CONCRETE CURB & GUTTER 30-INCH TYPE A | 10 MAINTENANCE RAMP |

XXX SAWING CONCRETE/ASPHALT



LEGEND

- 1

CONCRETE PAVEMENT 8-INCH (DOWELED AND TINED)
- 2

1.75" 4 LT 58-28S OVER 3.25" 3 LT 58-28S
- 3

ASPHALTIC SURFACE (4-INCH)
- 4

CONCRETE SIDEWALK 4-INCH
- 5

CONCRETE CURB & GUTTER 30-INCH TYPE A

6

CONCRETE CURB & GUTTER 30-INCH TYPE D

7

CONCRETE MEDIAN SLOPED NOSE TYPE 1

8

CONCRETE DRIVEWAY 6-INCH

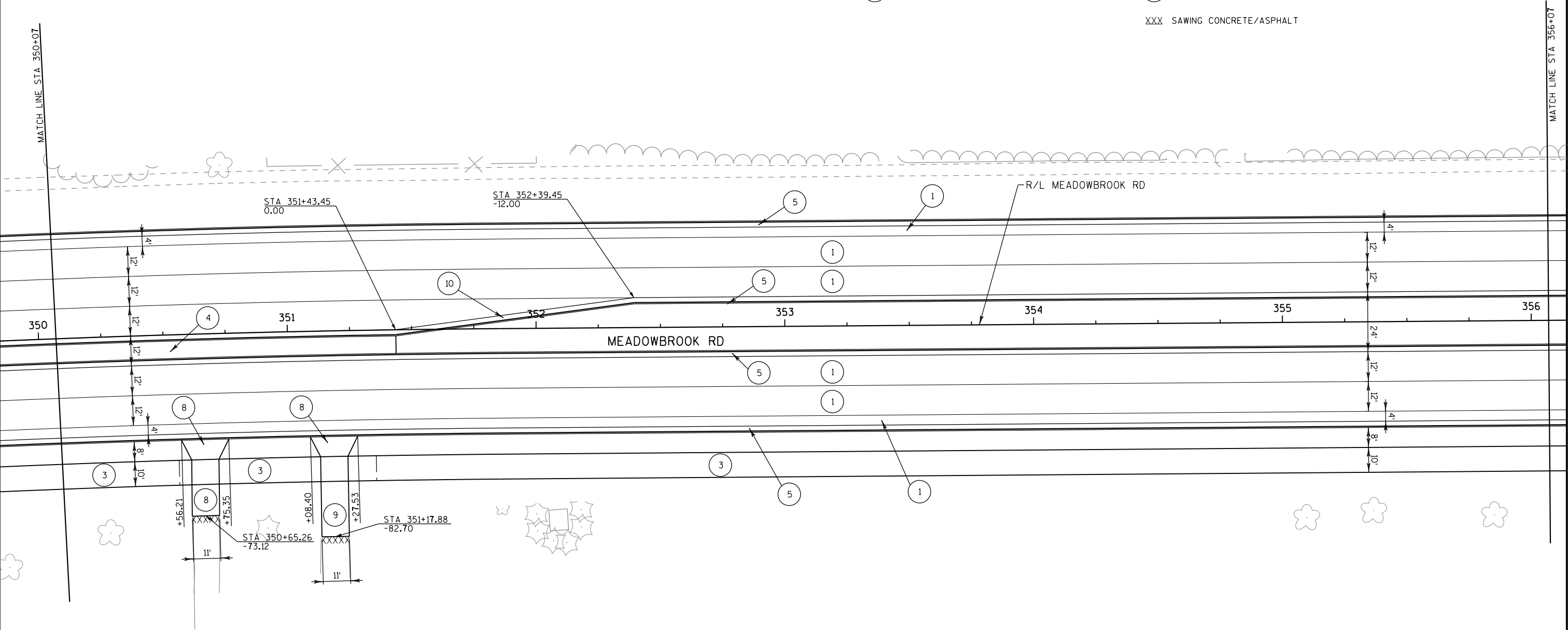
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ASPHALTIC SURFACE DRIVEWAY (4-INCH)

10

MAINTENANCE RAMP

XXX SAWING CONCRETE/ASPHALT



LEGEND

- 1

CONCRETE PAVEMENT 8-INCH (DOWELED AND TINED)
- 2

1.75" 4 LT 58-28S OVER 3.25" 3 LT 58-28S
- 3

ASPHALTIC SURFACE (4-INCH)
- 4

CONCRETE SIDEWALK 4-INCH
- 5

CONCRETE CURB & GUTTER 30-INCH TYPE A
- 6

CONCRETE CURB & GUTTER 30-INCH TYPE D
- 7

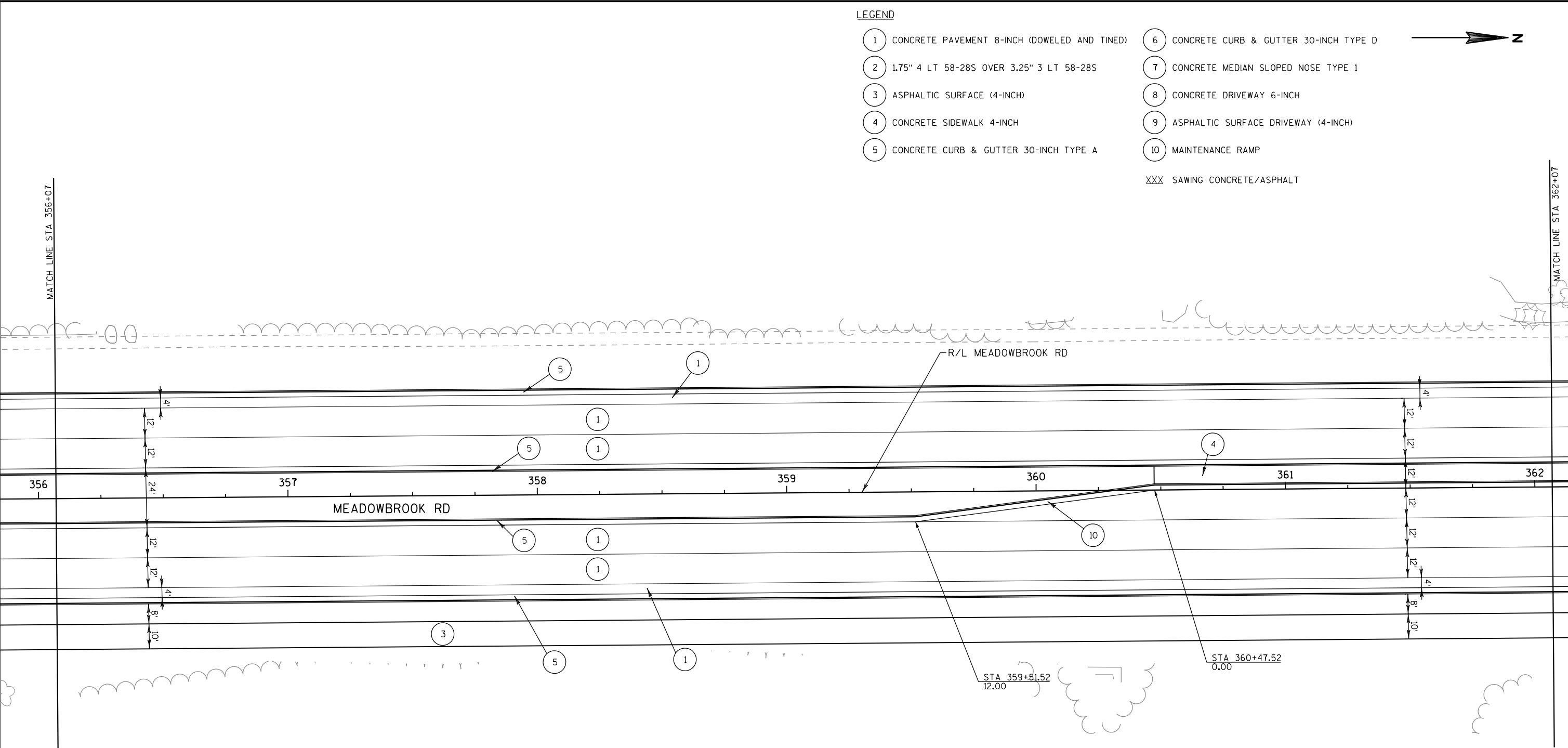
CONCRETE MEDIAN SLOPED NOSE TYPE 1
- 8

CONCRETE DRIVEWAY 6-INCH
- 9

ASPHALTIC SURFACE DRIVEWAY (4-INCH)
- 10

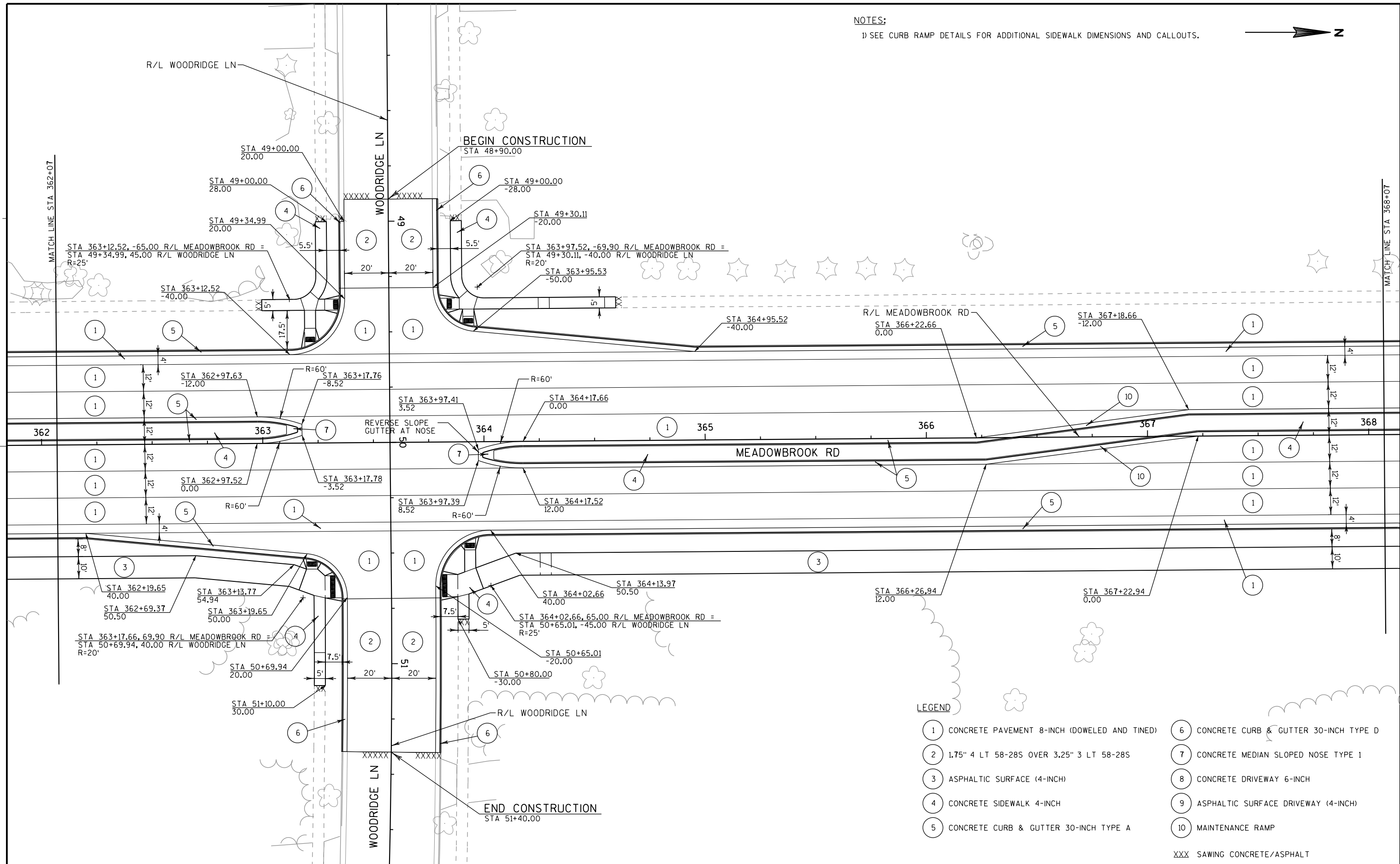
MAINTENANCE RAMP

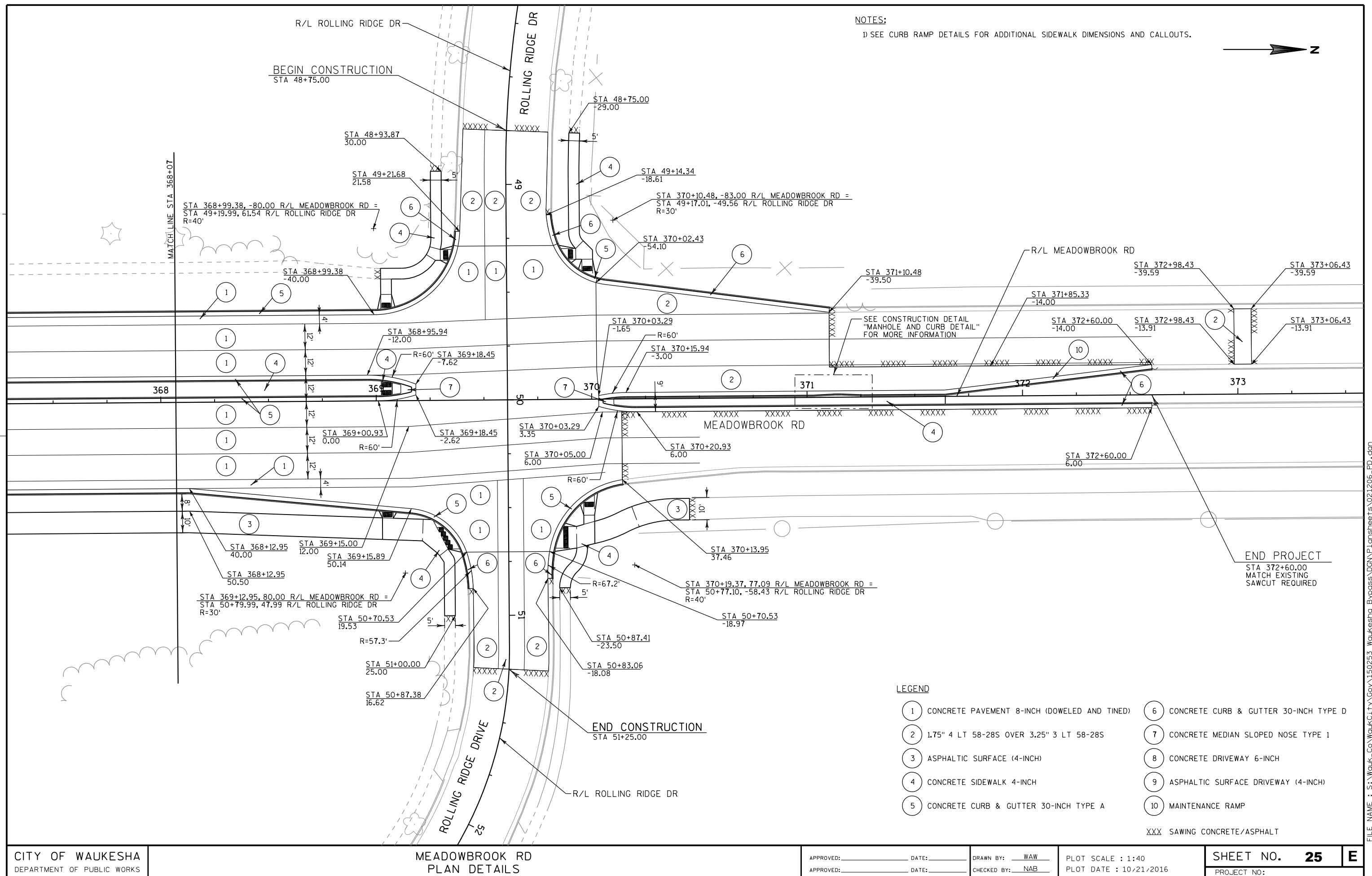
XXX SAWING CONCRETE/ASPHALT

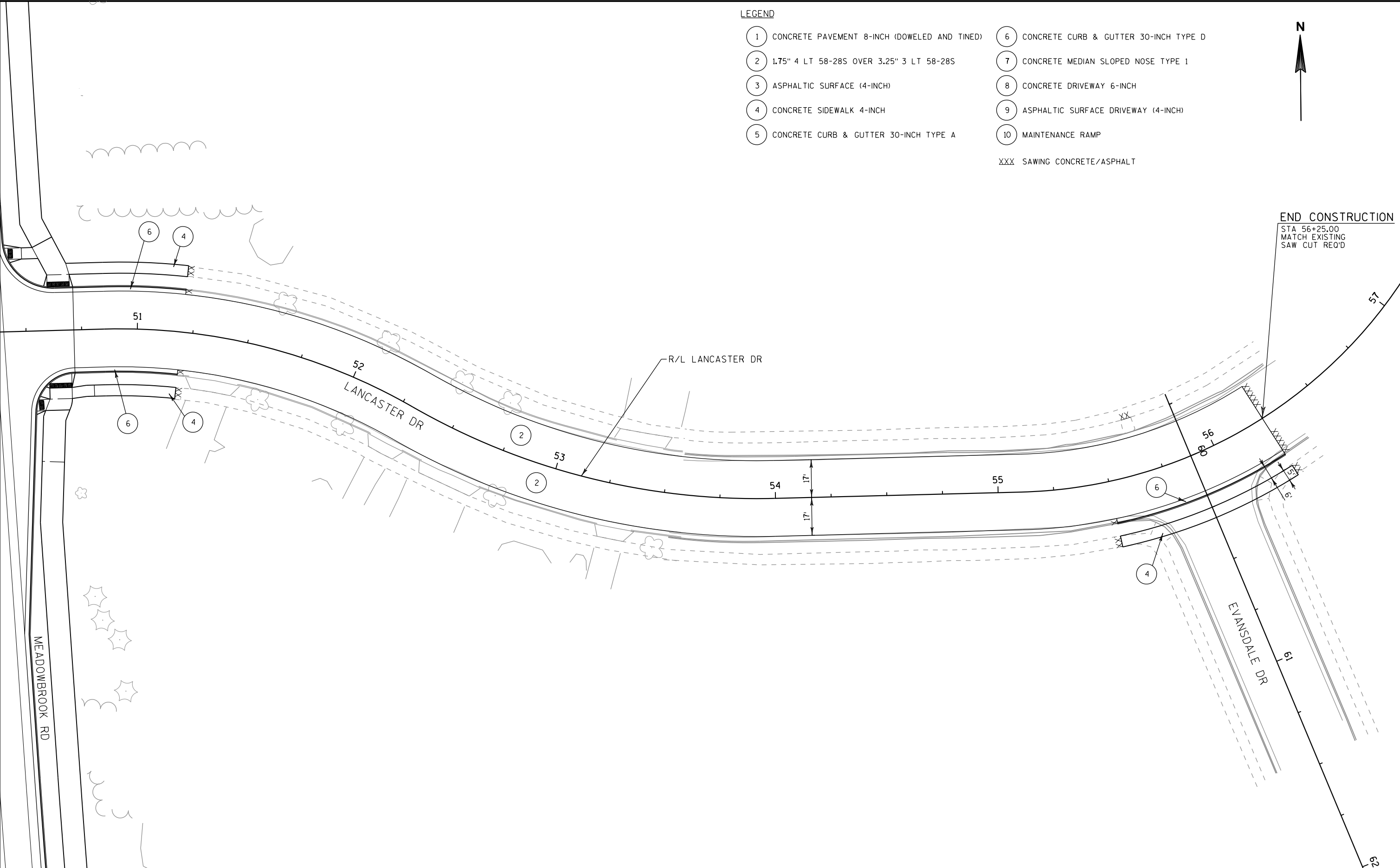


NOTES:

1) SEE CURB RAMP DETAILS FOR ADDITIONAL SIDEWALK DIMENSIONS AND CALLOUTS.







LEGEND

- | | |
|--|---|
| 1 CONCRETE PAVEMENT 8-INCH (DOWELED AND TINED) | 6 CONCRETE CURB & GUTTER 30-INCH TYPE D |
| 2 1.75" 4 LT 58-28S OVER 3.25" 3 LT 58-28S | 7 CONCRETE MEDIAN SLOPED NOSE TYPE 1 |
| 3 ASPHALTIC SURFACE (4-INCH) | 8 CONCRETE DRIVEWAY 6-INCH |
| 4 CONCRETE SIDEWALK 4-INCH | 9 ASPHALTIC SURFACE DRIVEWAY (4-INCH) |
| 5 CONCRETE CURB & GUTTER 30-INCH TYPE A | 10 MAINTENANCE RAMP |
| | XXX SAWING CONCRETE/ASPHALT |

END CONSTRUCTION

STA 56+25.00
MATCH EXISTING
SAW CUT REQ'D

CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS

MEADOWBROOK RD
PLAN DETAILS

APPROVED: _____ DATE: _____
APPROVED: _____ DATE: _____

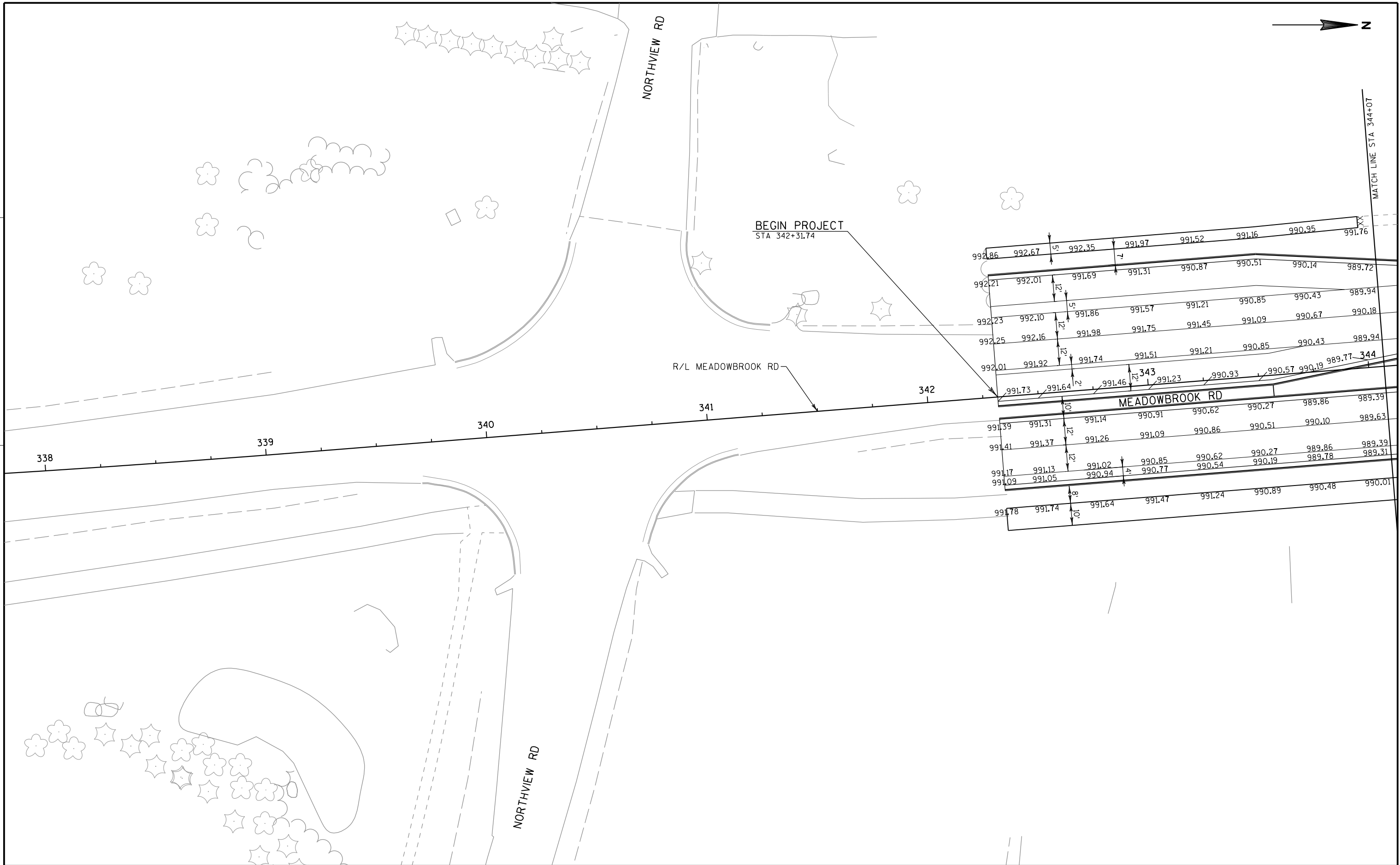
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CHECKED BY: NAB

PLOT SCALE : 1:40
PLOT DATE : 10/21/2016

SHEET NO. **26**
PROJECT NO:

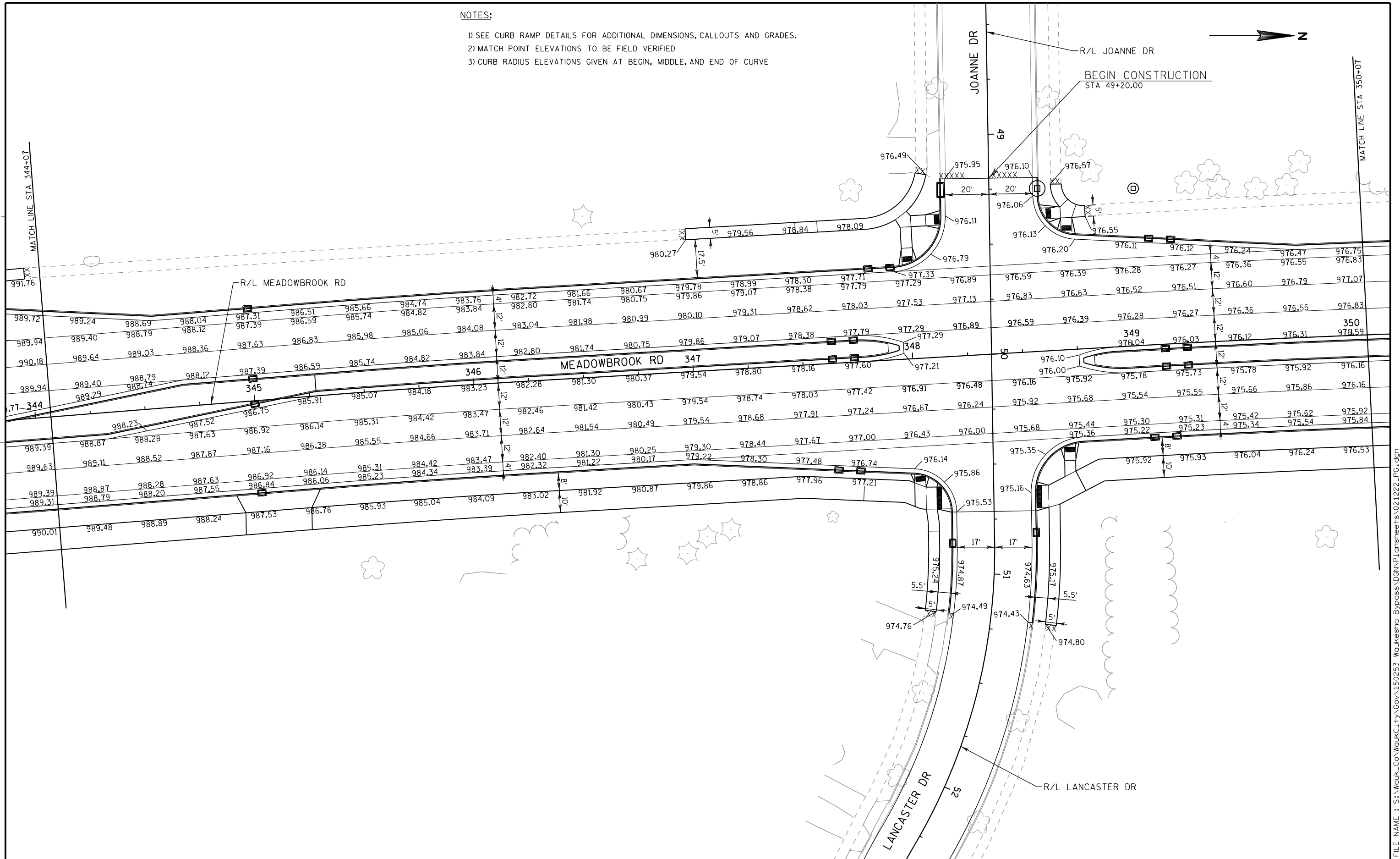
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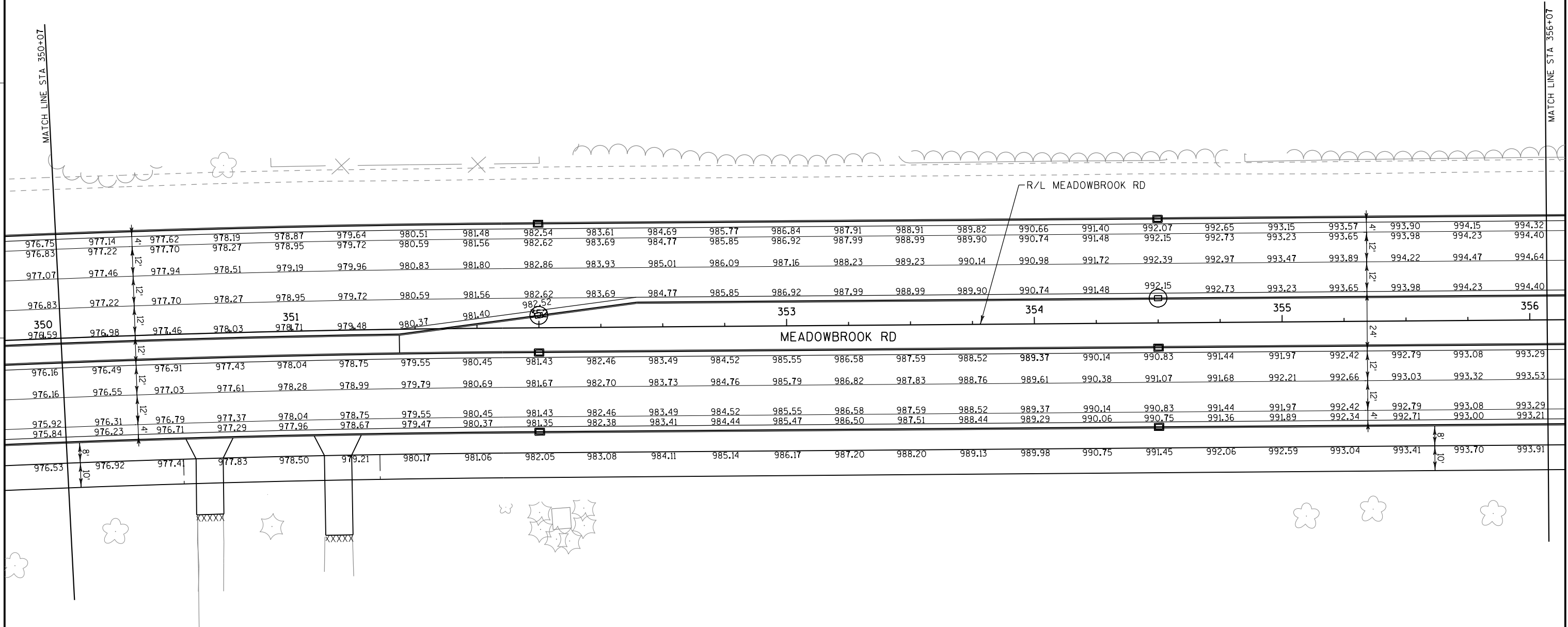
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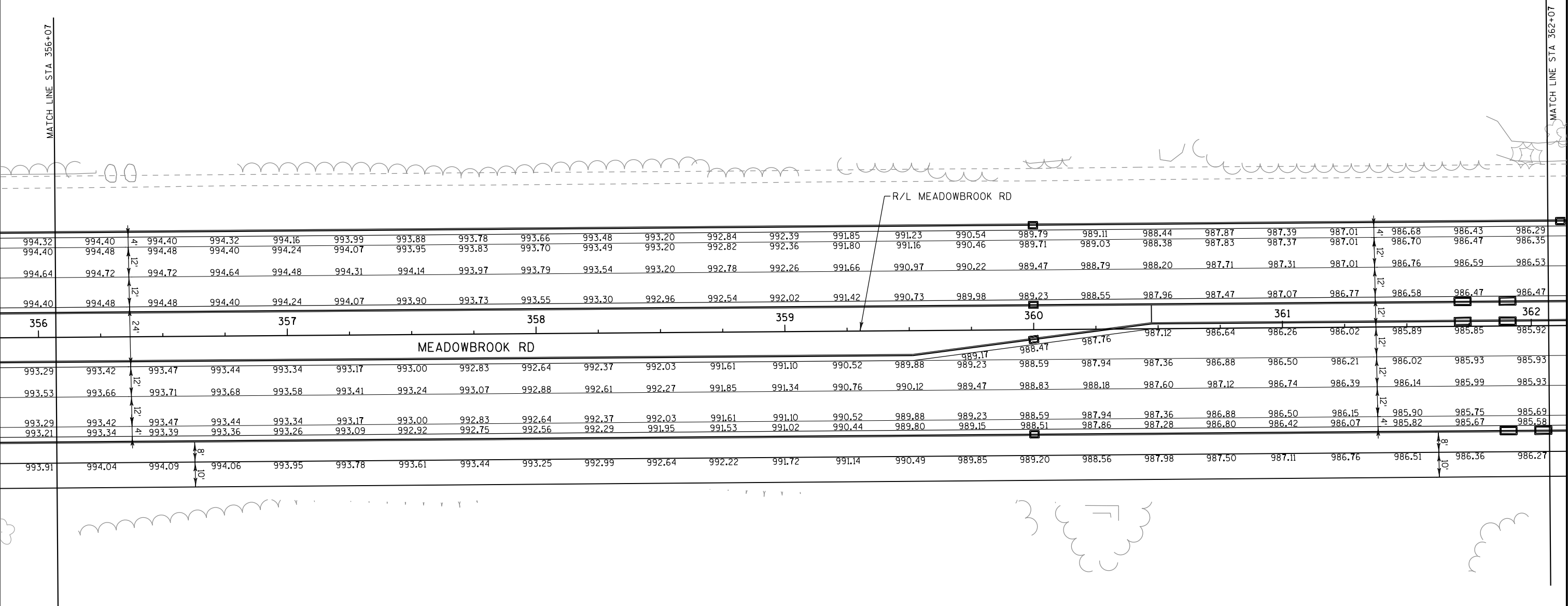


NOTES:

- 1) SEE CURB RAMP DETAILS FOR ADDITIONAL DIMENSIONS, CALLOUTS AND GRADES.
- 2) MATCH POINT ELEVATIONS TO BE FIELD VERIFIED
- 3) CURB RADIUS ELEVATIONS GIVEN AT BEGIN, MIDDLE, AND END OF CURVE

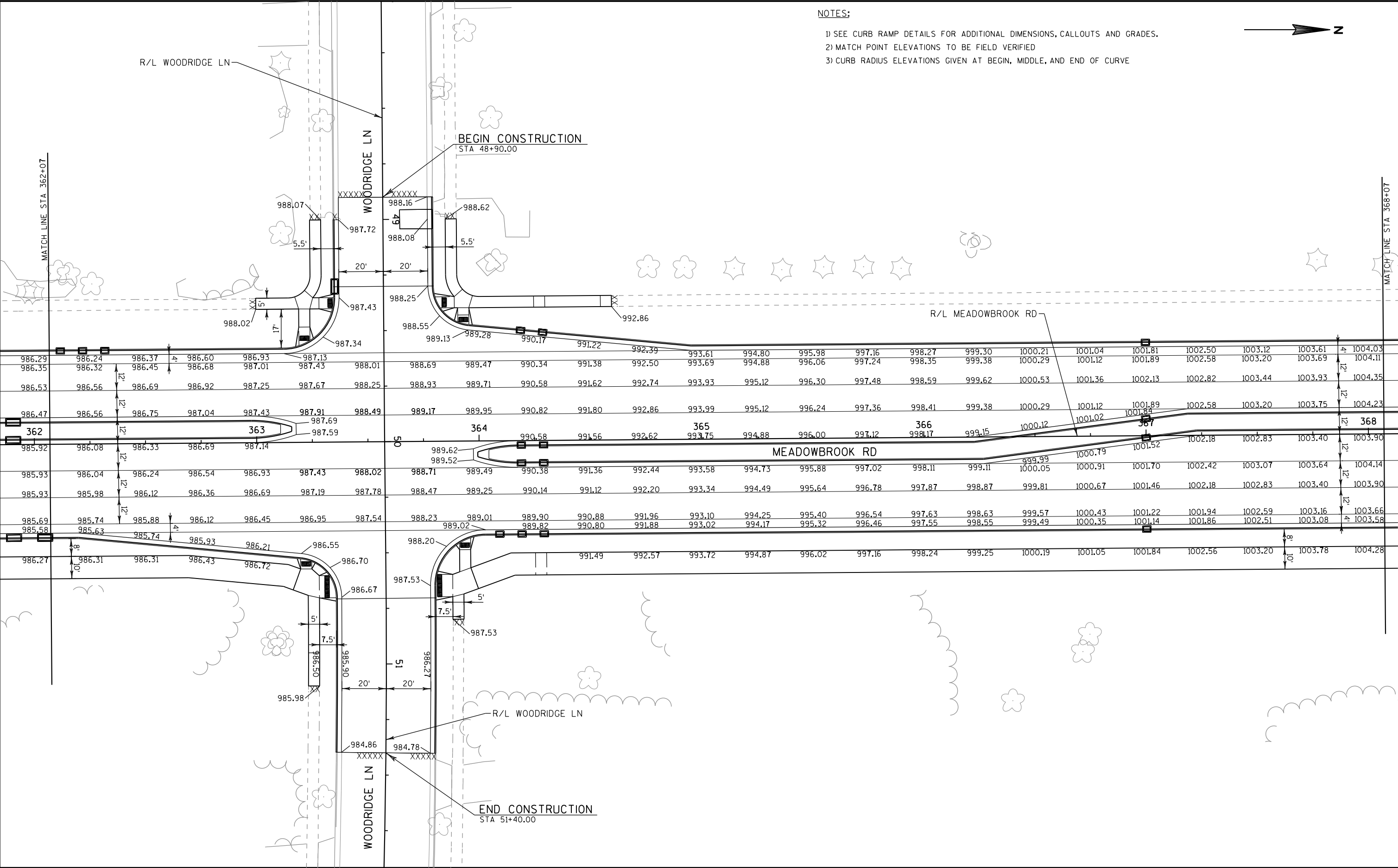




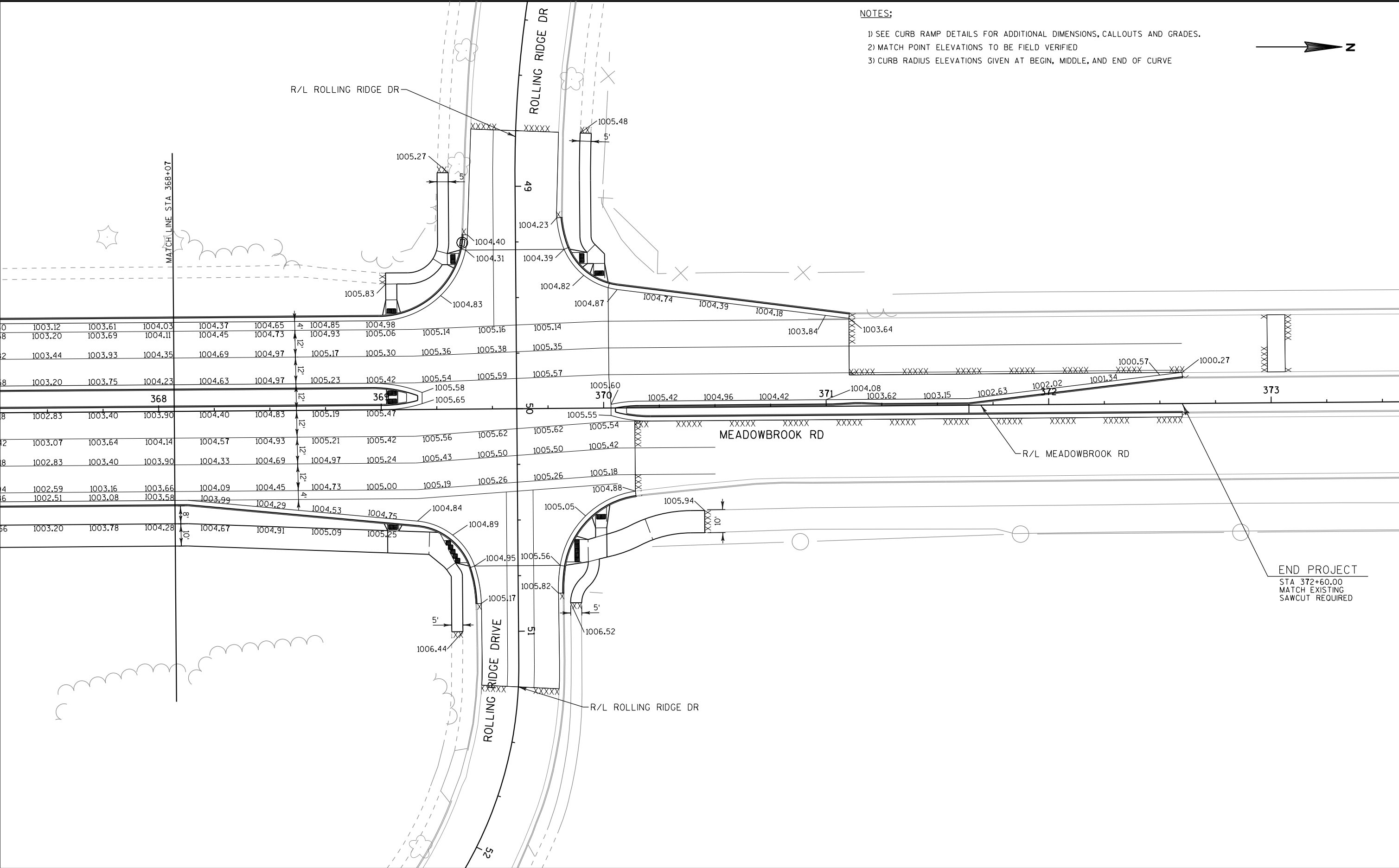


NOTES:

- 1) SEE CURB RAMP DETAILS FOR ADDITIONAL DIMENSIONS, CALLOUTS AND GRADES.
2) MATCH POINT ELEVATIONS TO BE FIELD VERIFIED
3) CURB RADIUS ELEVATIONS GIVEN AT BEGIN, MIDDLE, AND END OF CURVE



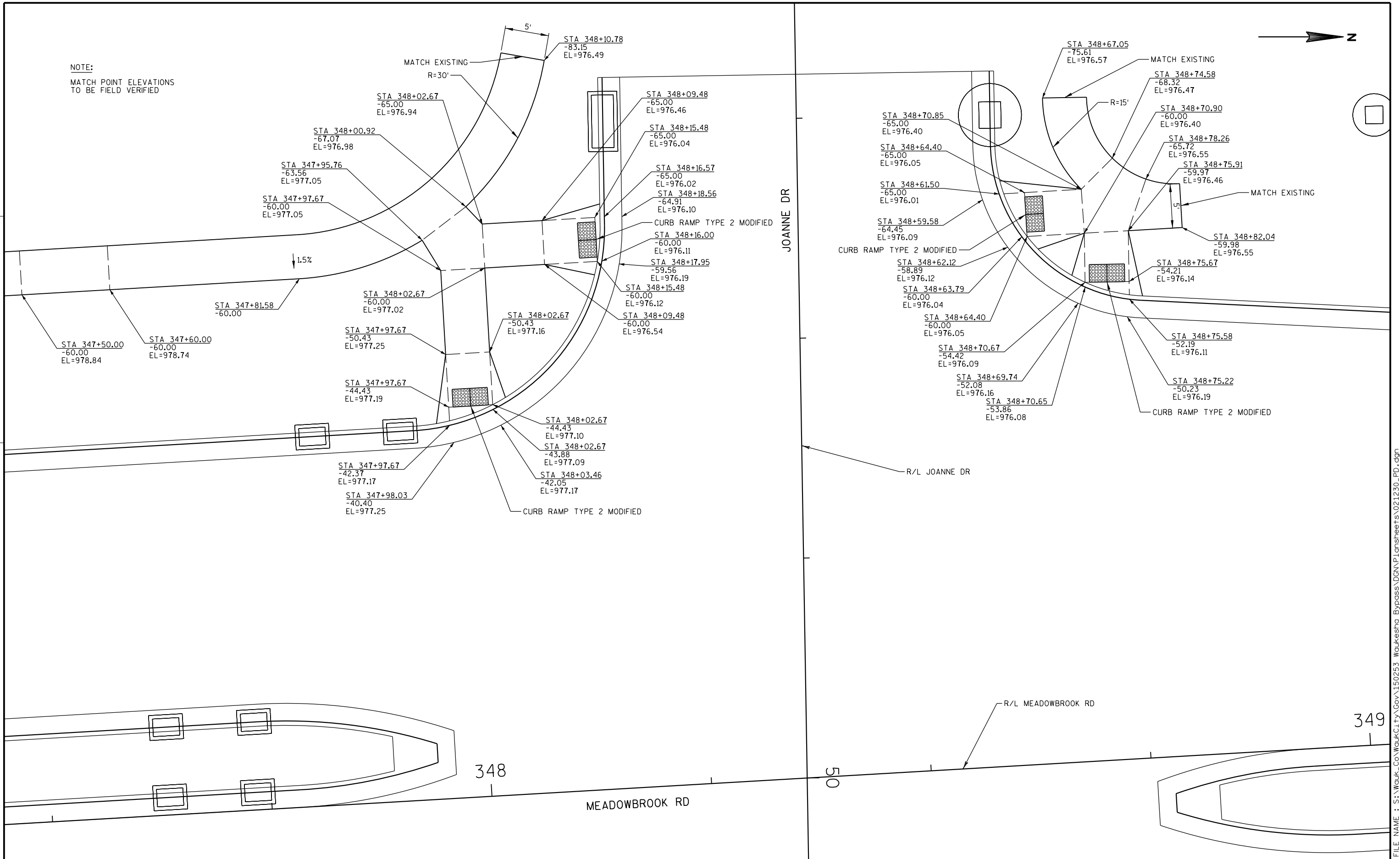
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- NOTES:
- 1) SEE CURB RAMP DETAILS FOR ADDITIONAL DIMENSIONS, CALLOUTS AND GRADES.
 - 2) MATCH POINT ELEVATIONS TO BE FIELD VERIFIED
 - 3) CURB RADIUS ELEVATIONS GIVEN AT BEGIN, MIDDLE, AND END OF CURVE

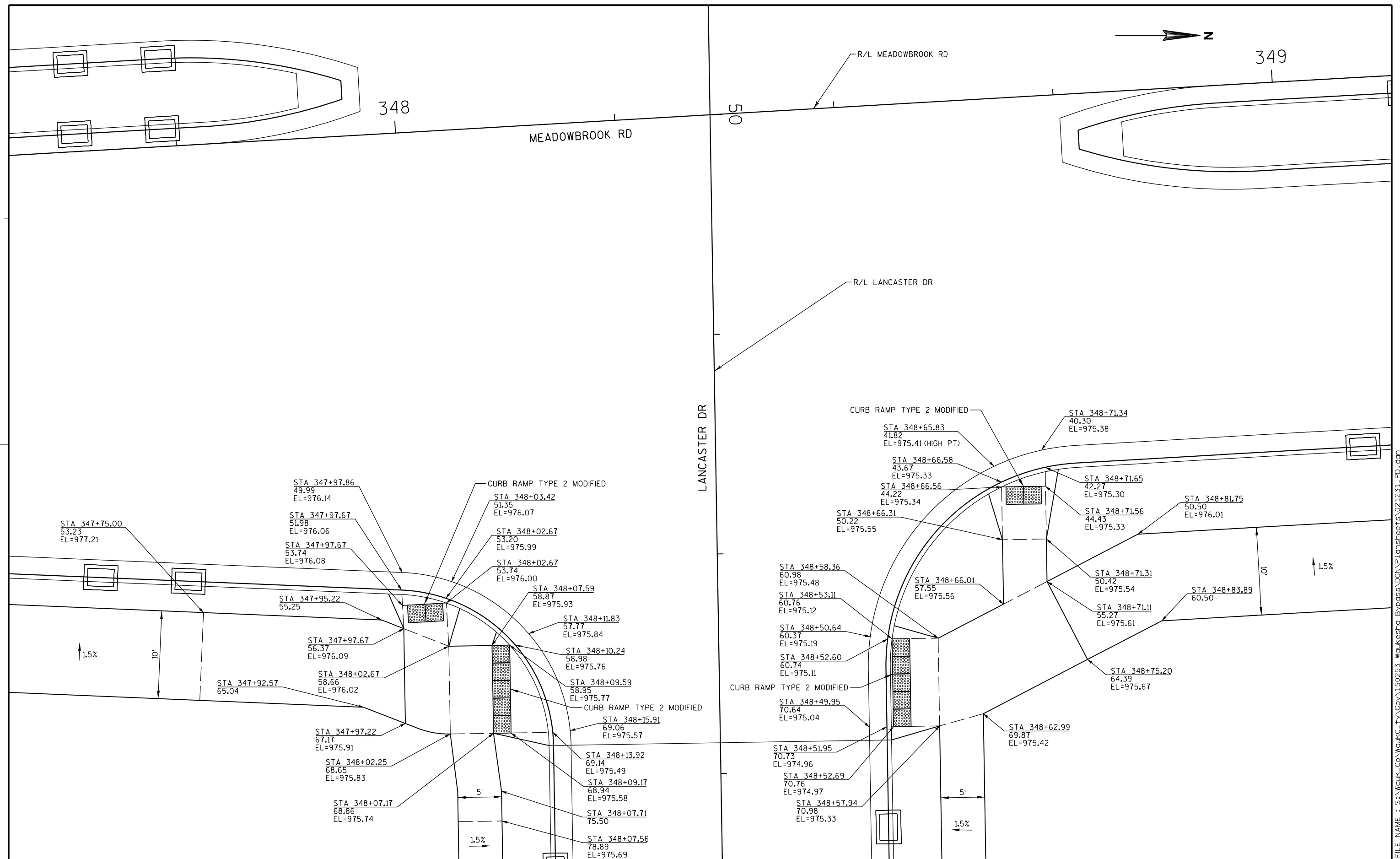


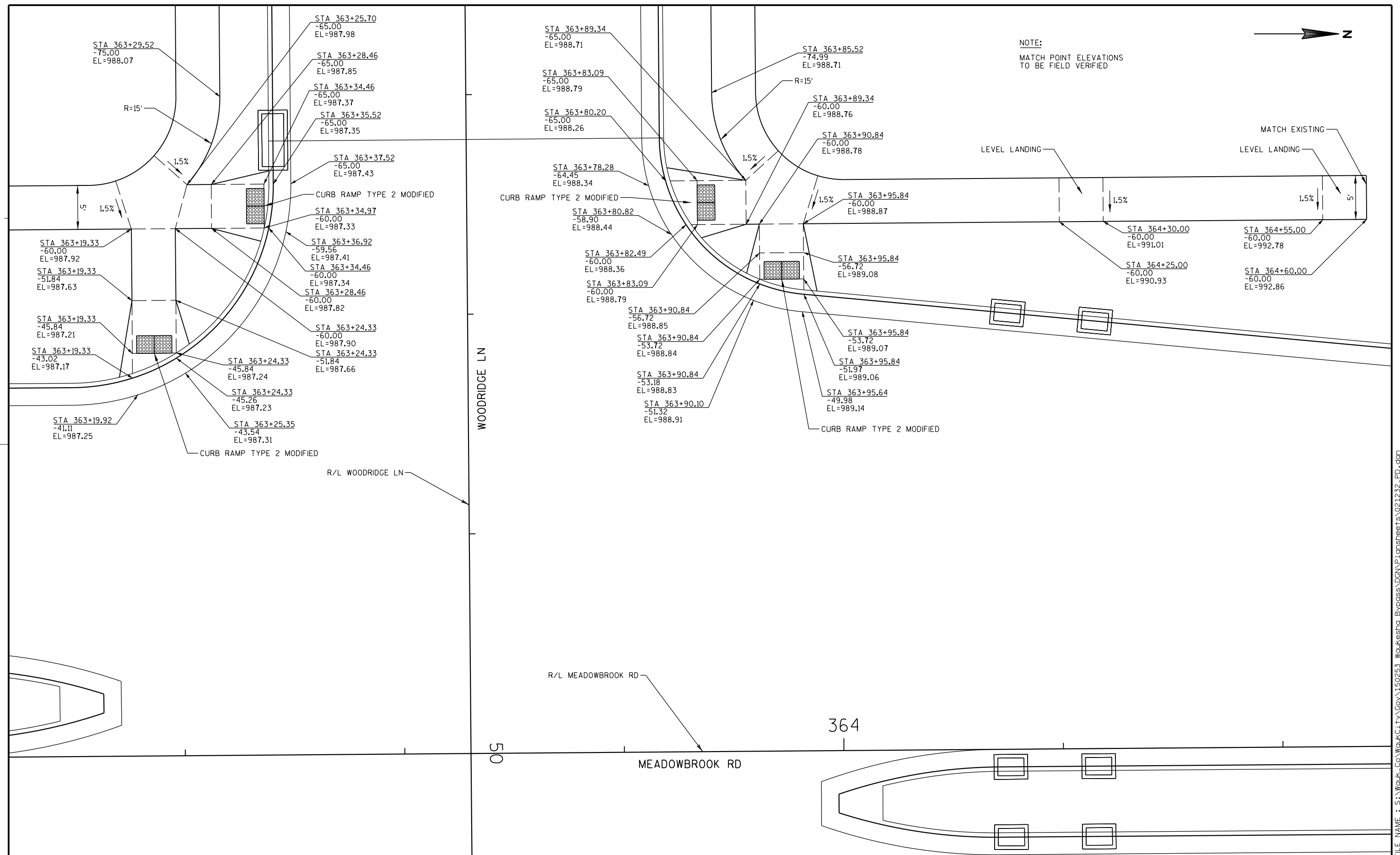
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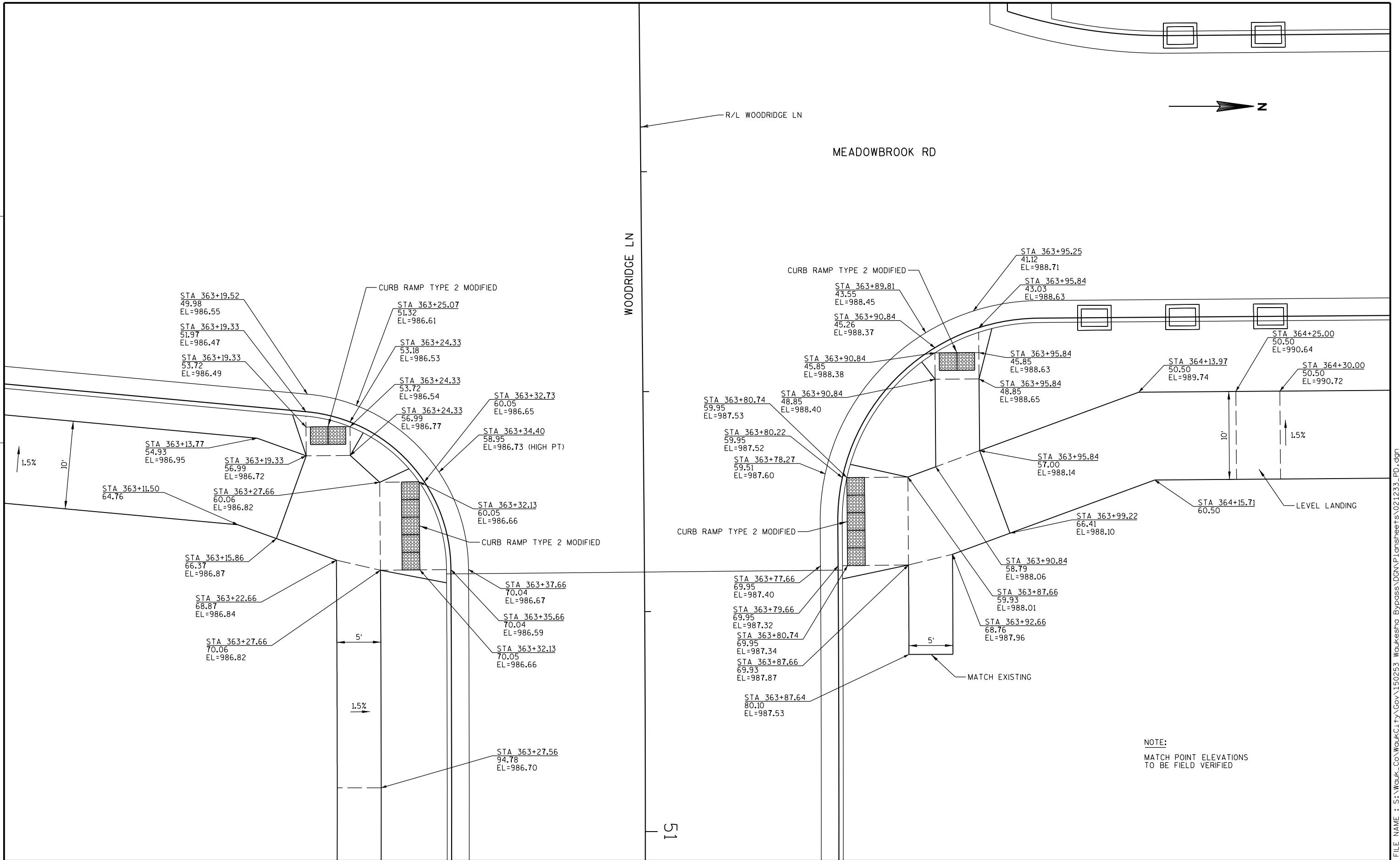


NOTE:
MATCH POINT ELEVATIONS
TO BE FIELD VERIFIED

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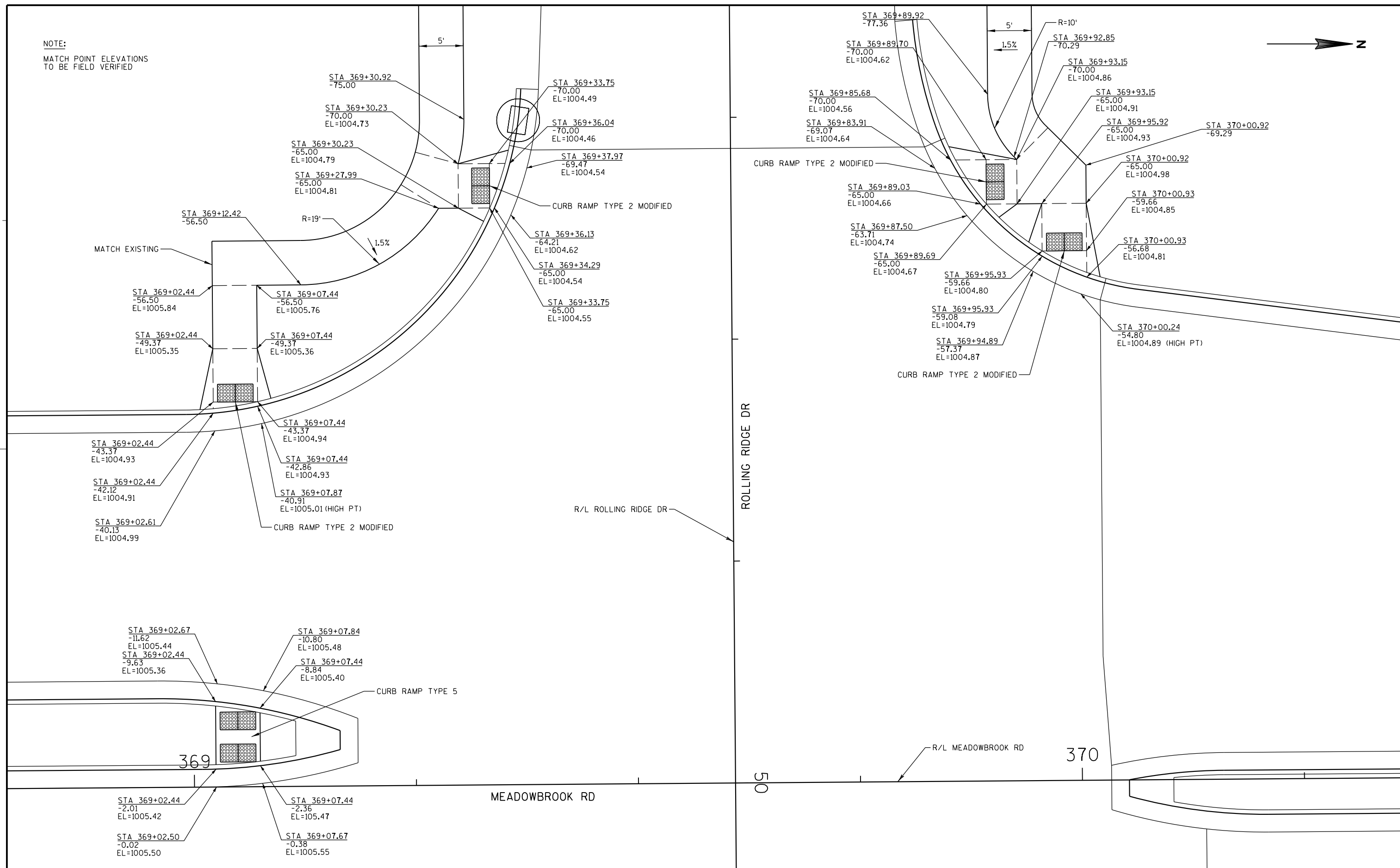






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NOTE:
MATCH POINT ELEVATIONS
TO BE FIELD VERIFIED



CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS

MEADOWBROOK RD
CURB RAMP DETAILS

APPROVED: _____ DATE: _____
APPROVED: _____ DATE: _____

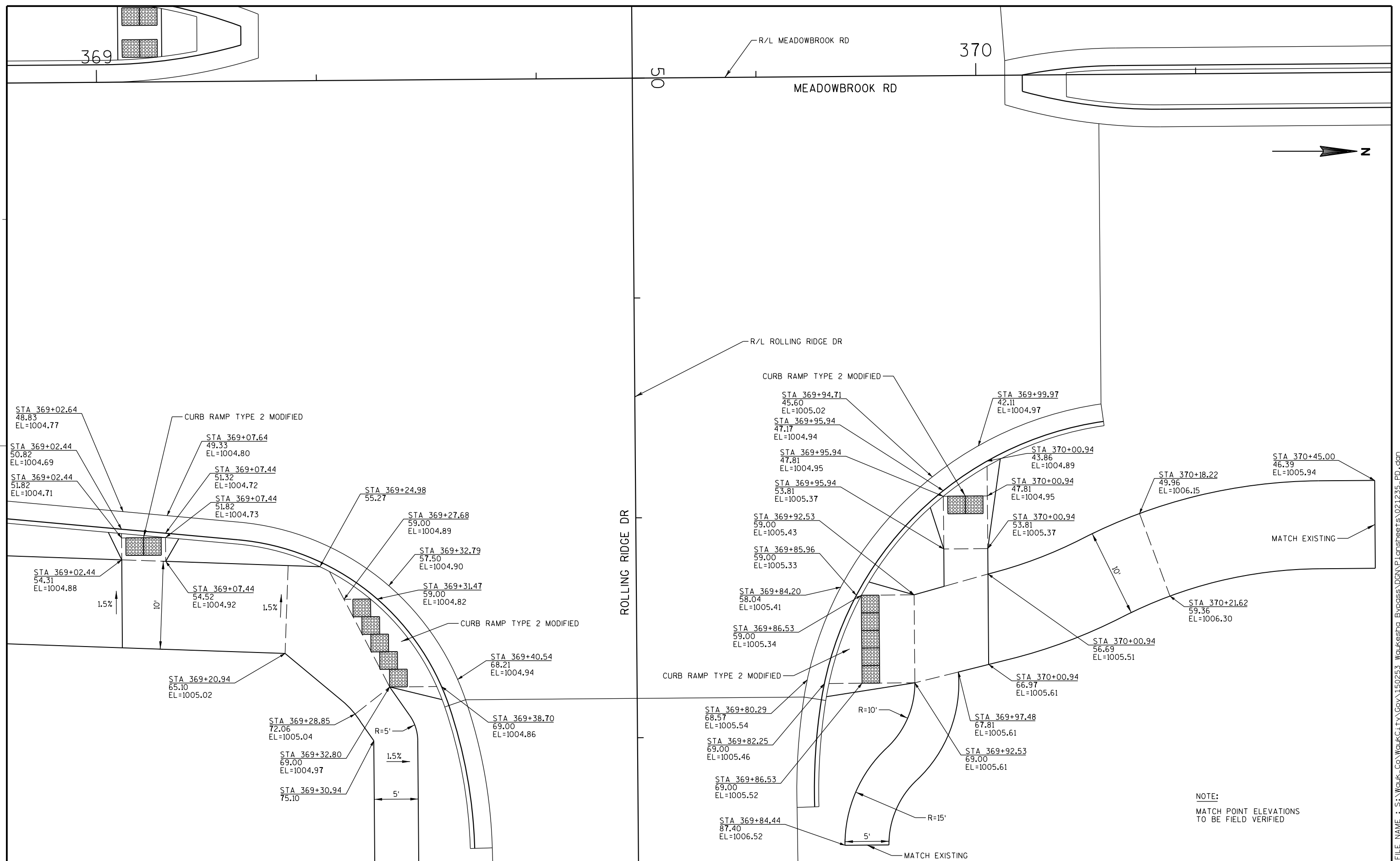
DRAWN BY: WAW
CHECKED BY: NAB

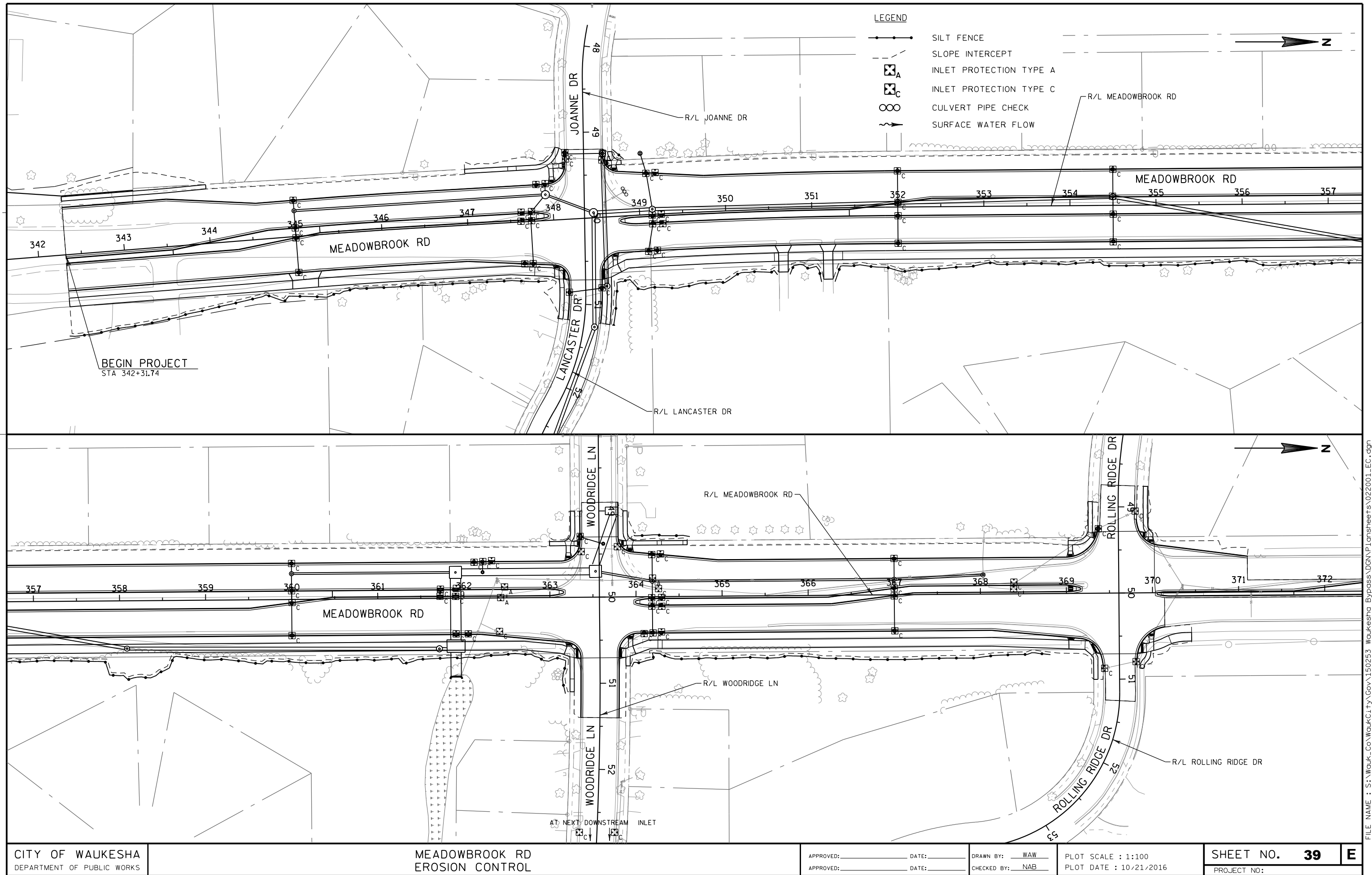
PLOT SCALE : 1:10
PLOT DATE : 10/21/2016

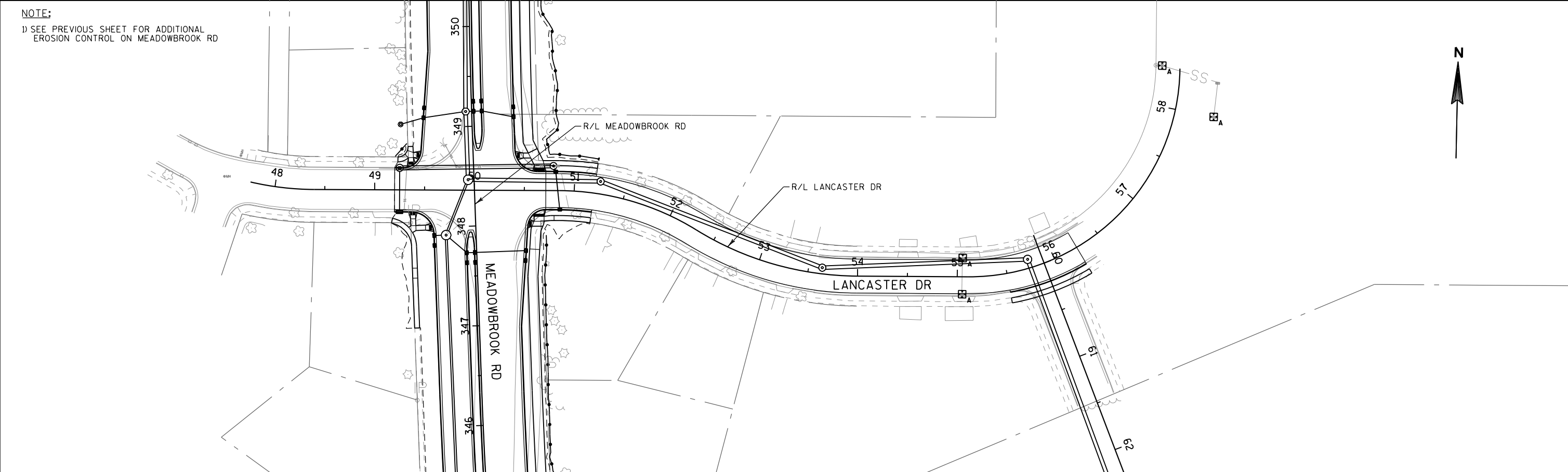
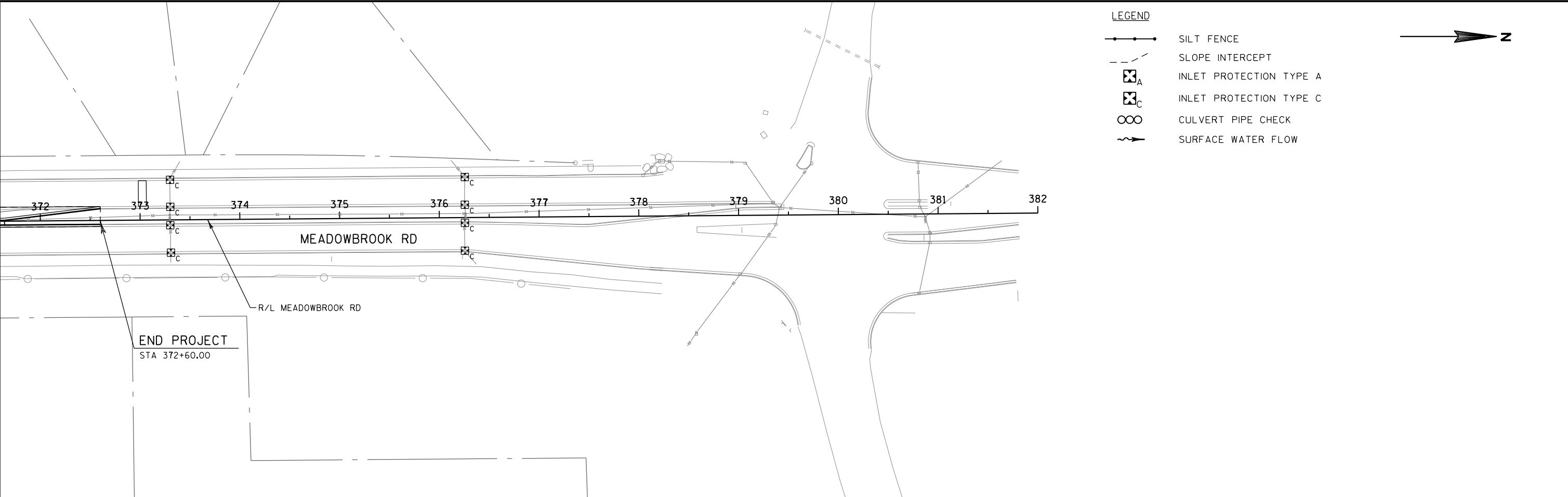
SHEET NO. **37**
PROJECT NO:

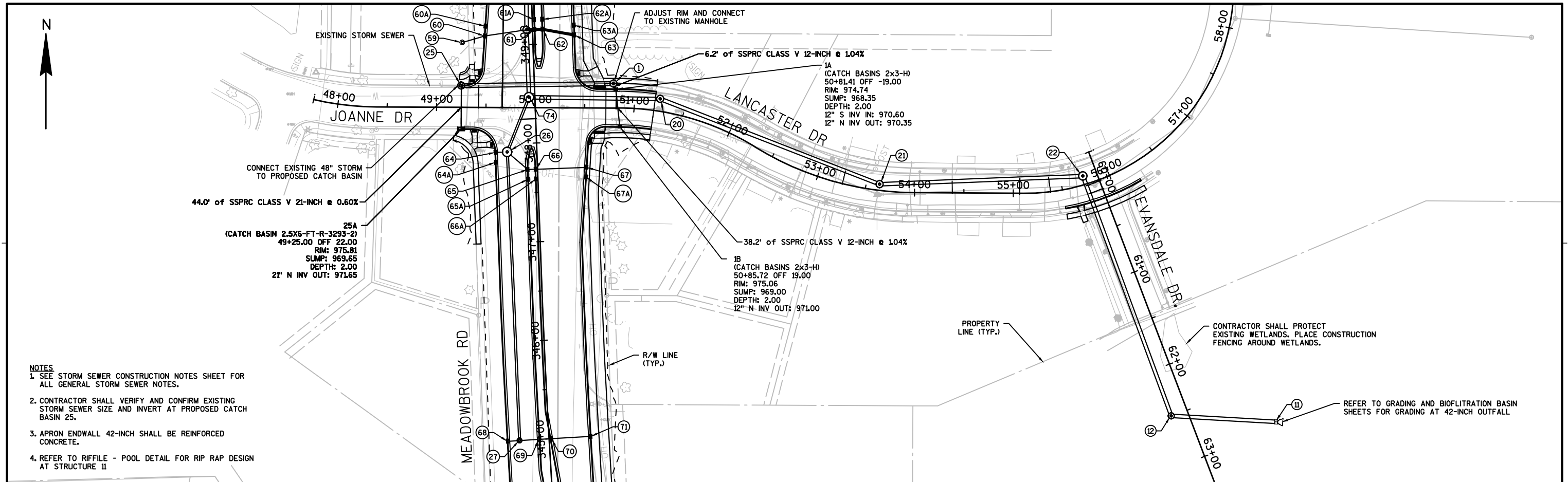
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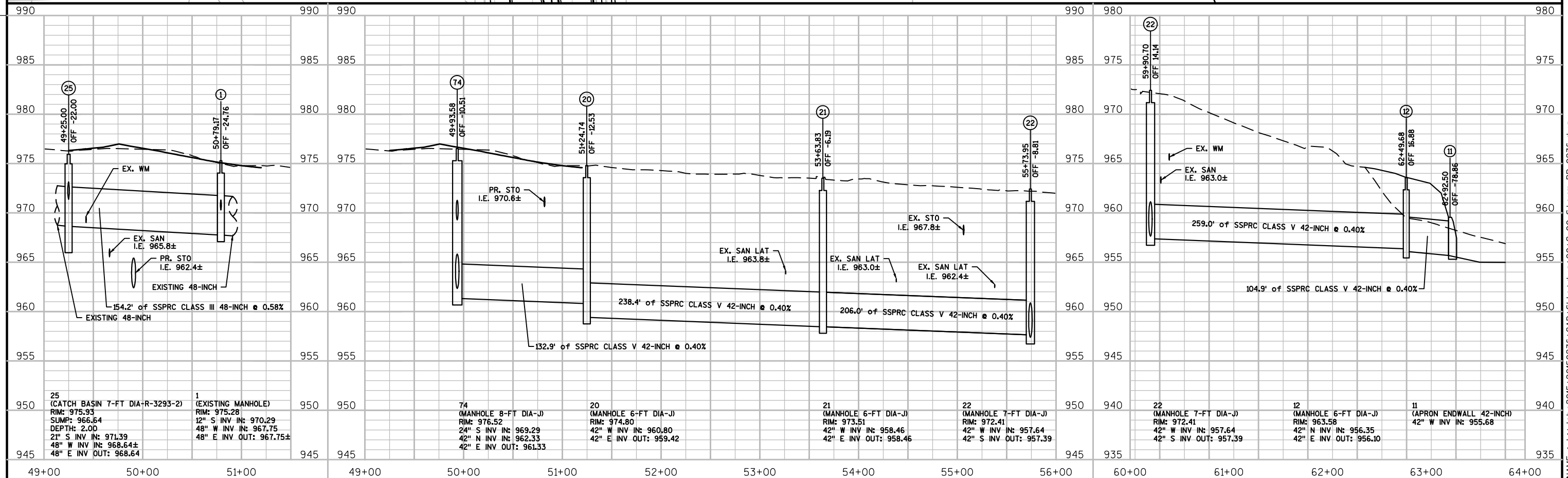




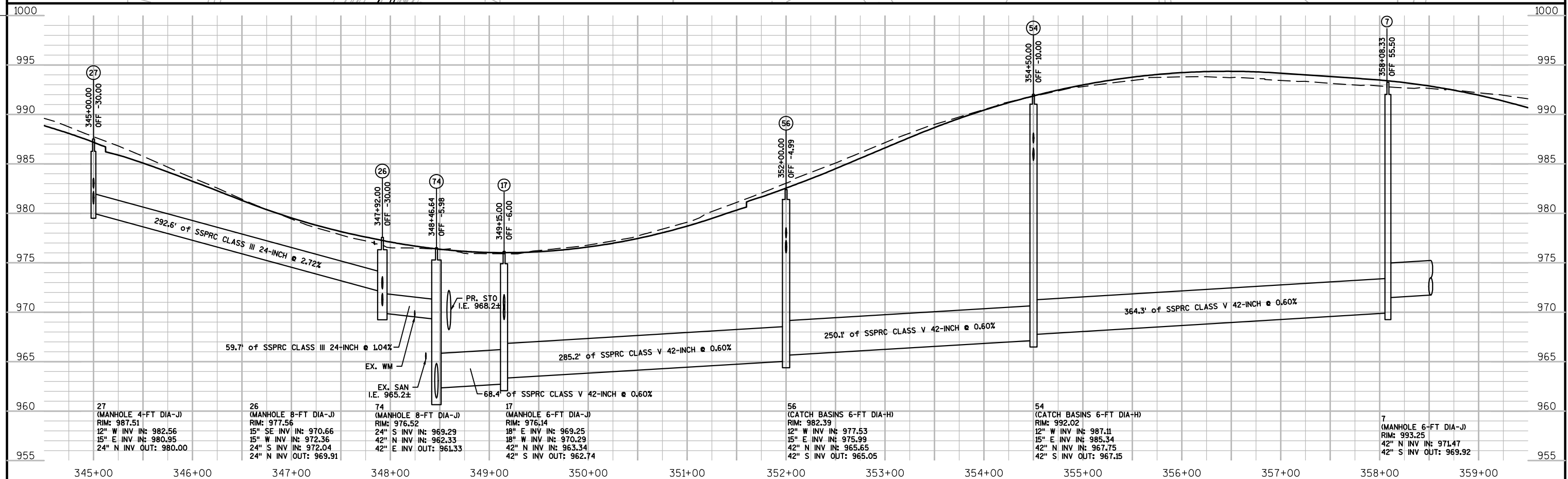
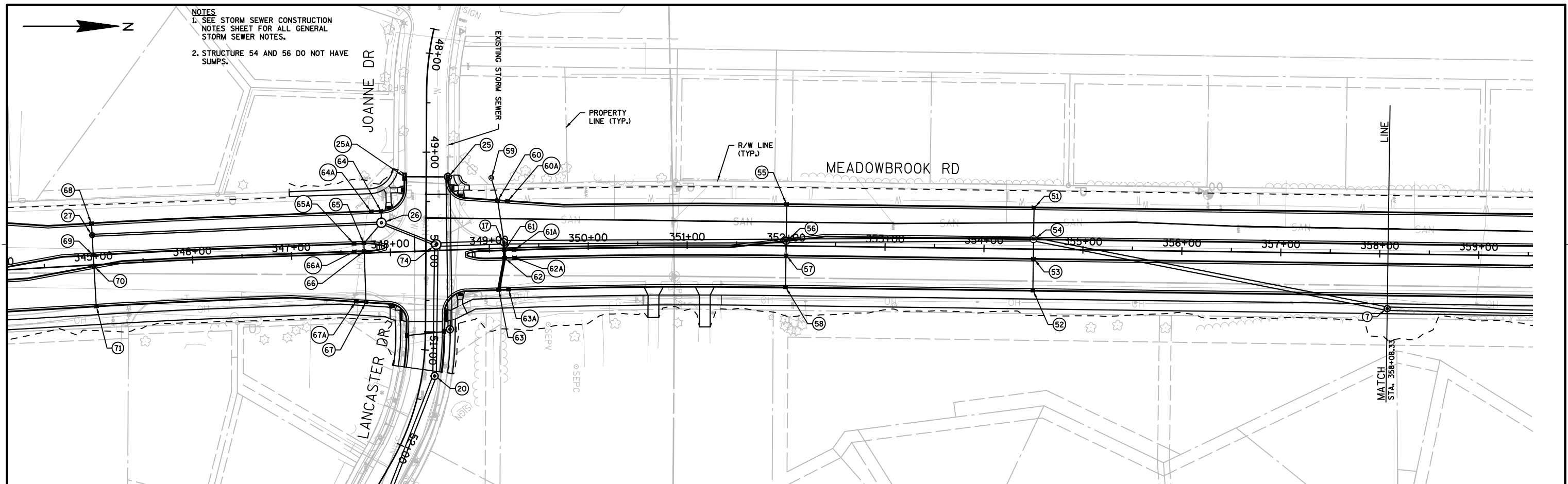


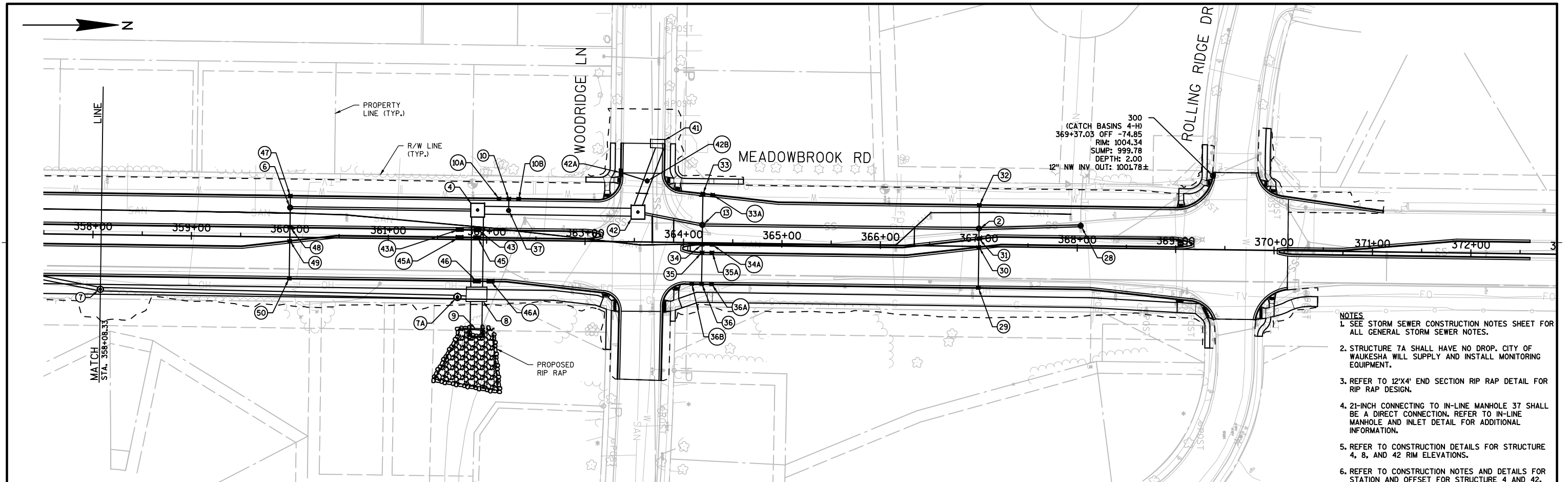


- NOTES**
1. SEE STORM SEWER CONSTRUCTION NOTES SHEET FOR ALL GENERAL STORM SEWER NOTES.
 2. CONTRACTOR SHALL VERIFY AND CONFIRM EXISTING STORM SEWER SIZE AND INVERT AT PROPOSED CATCH BASIN 25.
 3. APRON ENDWALL 42-INCH SHALL BE REINFORCED CONCRETE.
 4. REFER TO RIFFLE - POOL DETAIL FOR RIP RAP DESIGN AT STRUCTURE 11

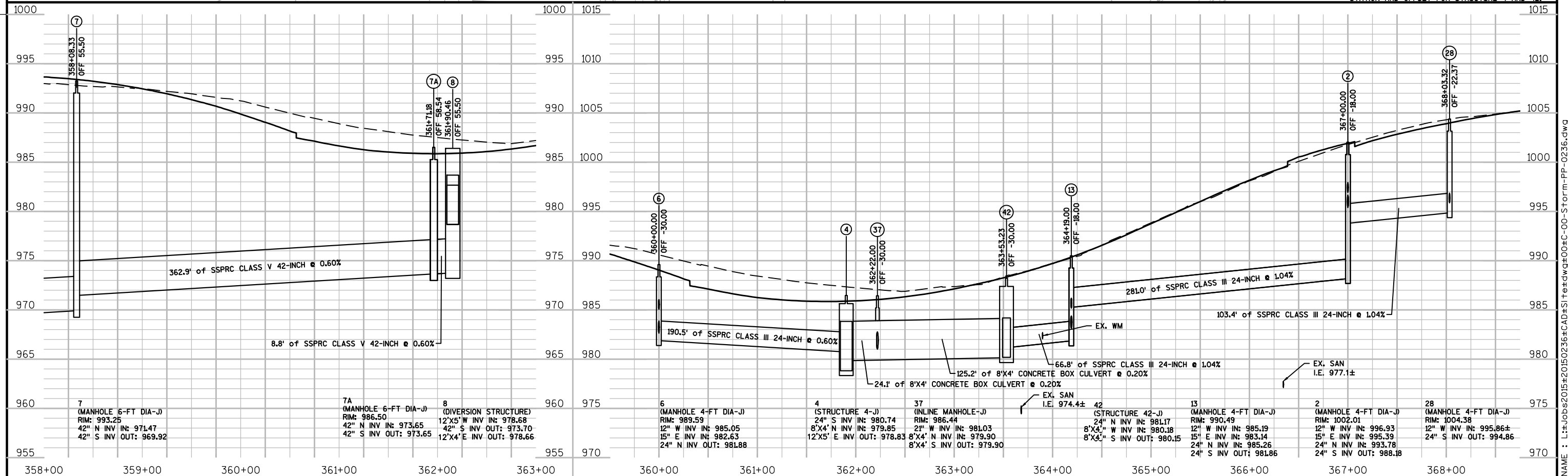


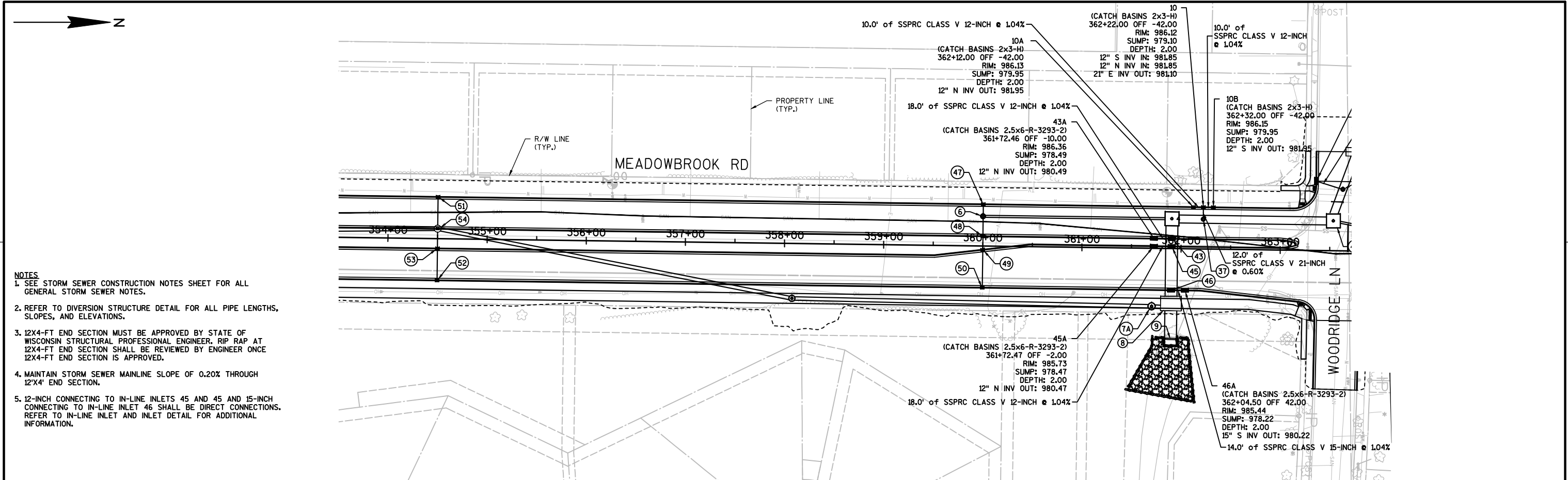
FILE NAME : L:\Jobs\2015\20150236\CAD\Site+dwg\00=C-00-Storm-PP-0236.dwg





- NOTES
1. SEE STORM SEWER CONSTRUCTION NOTES SHEET FOR ALL GENERAL STORM SEWER NOTES.
 2. STRUCTURE 7A SHALL HAVE NO DROP. CITY OF WAUKESHA WILL SUPPLY AND INSTALL MONITORING EQUIPMENT.
 3. REFER TO 12'X4' END SECTION RIP RAP DETAIL FOR RIP RAP DESIGN.
 4. 21-INCH CONNECTING TO IN-LINE MANHOLE 37 SHALL BE A DIRECT CONNECTION. REFER TO IN-LINE MANHOLE AND INLET DETAIL FOR ADDITIONAL INFORMATION.
 5. REFER TO CONSTRUCTION DETAILS FOR STRUCTURE 4, 8, AND 42 RIM ELEVATIONS.
 6. REFER TO CONSTRUCTION NOTES AND DETAILS FOR STATION AND OFFSET FOR STRUCTURE 4 AND 42.



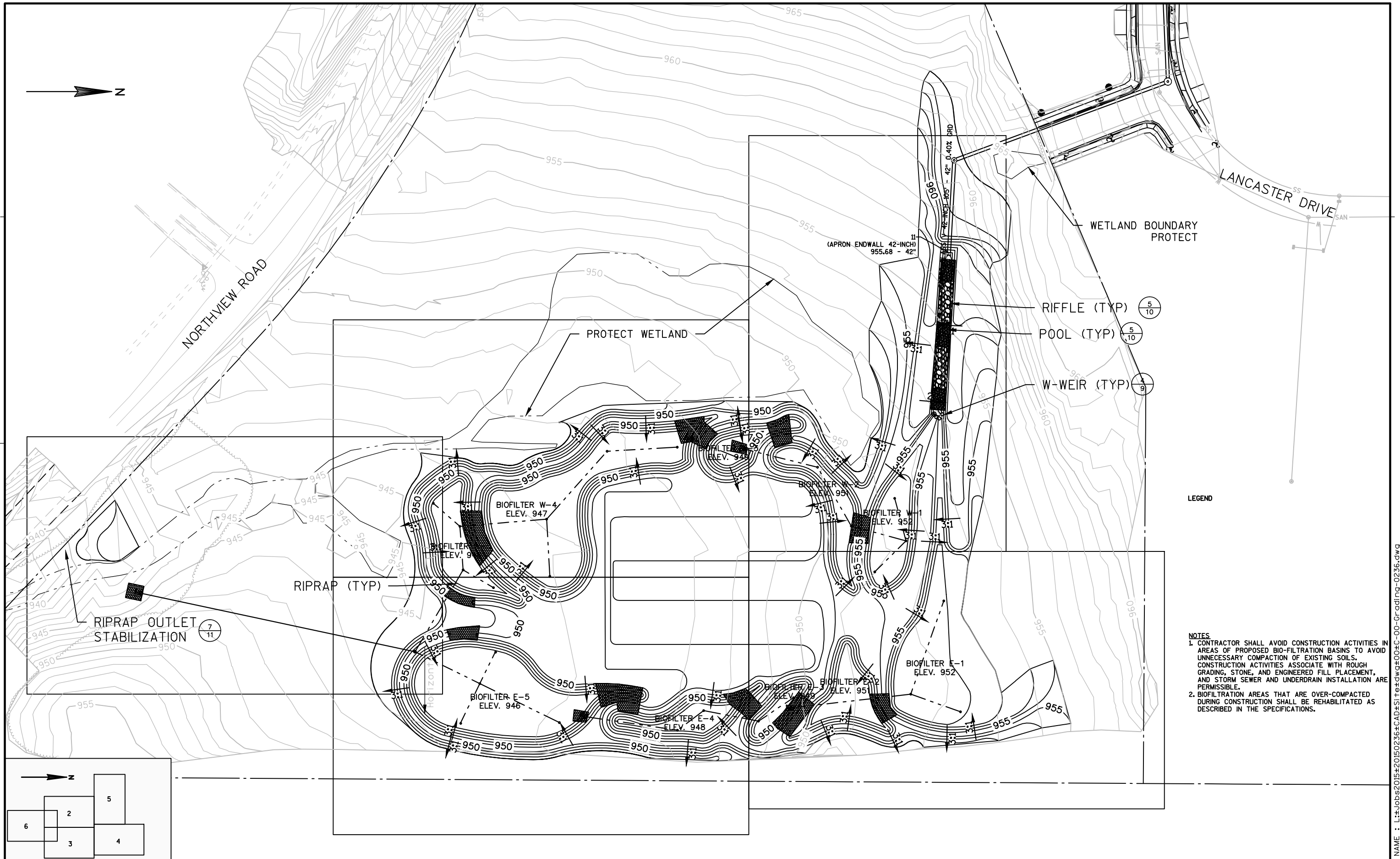


- NOTES**
1. SEE STORM SEWER CONSTRUCTION NOTES SHEET FOR ALL GENERAL STORM SEWER NOTES.
 2. REFER TO DIVERSION STRUCTURE DETAIL FOR ALL PIPE LENGTHS, SLOPES, AND ELEVATIONS.
 3. 12X4-FT END SECTION MUST BE APPROVED BY STATE OF WISCONSIN STRUCTURAL PROFESSIONAL ENGINEER. RIP RAP AT 12X4-FT END SECTION SHALL BE REVIEWED BY ENGINEER ONCE 12X4-FT END SECTION IS APPROVED.
 4. MAINTAIN STORM SEWER MAINLINE SLOPE OF 0.20% THROUGH 12'X4' END SECTION.
 5. 12-INCH CONNECTING TO IN-LINE INLETS 45 AND 45 AND 15-INCH CONNECTING TO IN-LINE INLET 46 SHALL BE DIRECT CONNECTIONS. REFER TO IN-LINE INLET AND INLET DETAIL FOR ADDITIONAL INFORMATION.

1000	1000	1000	1000	995	995
995	995	995	995	995	990
990	990	990	990	990	985
985	985	985	985	985	980
980	980	980	980	980	975
975	975	975	975	975	970
970	970	970	970	970	965
965	965	965	965	965	960
960	960	960	960	960	955
955	955	955	955	955	950
51 (CATCH BASINS 2x3-H) RIM: 991.94 SUMP: 985.44 DEPTH: 2.00 12" E INV OUT: 987.44	54 (CATCH BASINS 6-FT DIA-H) RIM: 992.02 12" W INV IN: 987.11 15" E INV IN: 985.34 42" N INV IN: 967.75 42" S INV OUT: 967.15	53 (CATCH BASINS 2x3-H) RIM: 990.71 SUMP: 983.55 DEPTH: 2.00 12" E INV IN: 985.80 15" W INV OUT: 985.55	47 (CATCH BASINS 2x3-H) RIM: 989.67 SUMP: 983.17 DEPTH: 2.00 12" E INV OUT: 985.17	6 (MANHOLE 4-FT DIA-J) RIM: 989.59 12" W INV IN: 985.05 15" E INV IN: 982.63 24" N INV OUT: 981.88	48 (CATCH BASINS 2x3-H) RIM: 989.11 SUMP: 980.84 DEPTH: 2.00 15" E INV IN: 983.09 15" W INV OUT: 982.84

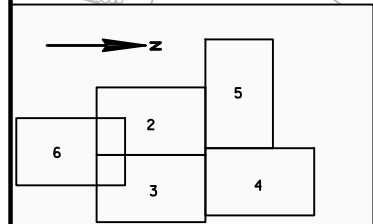
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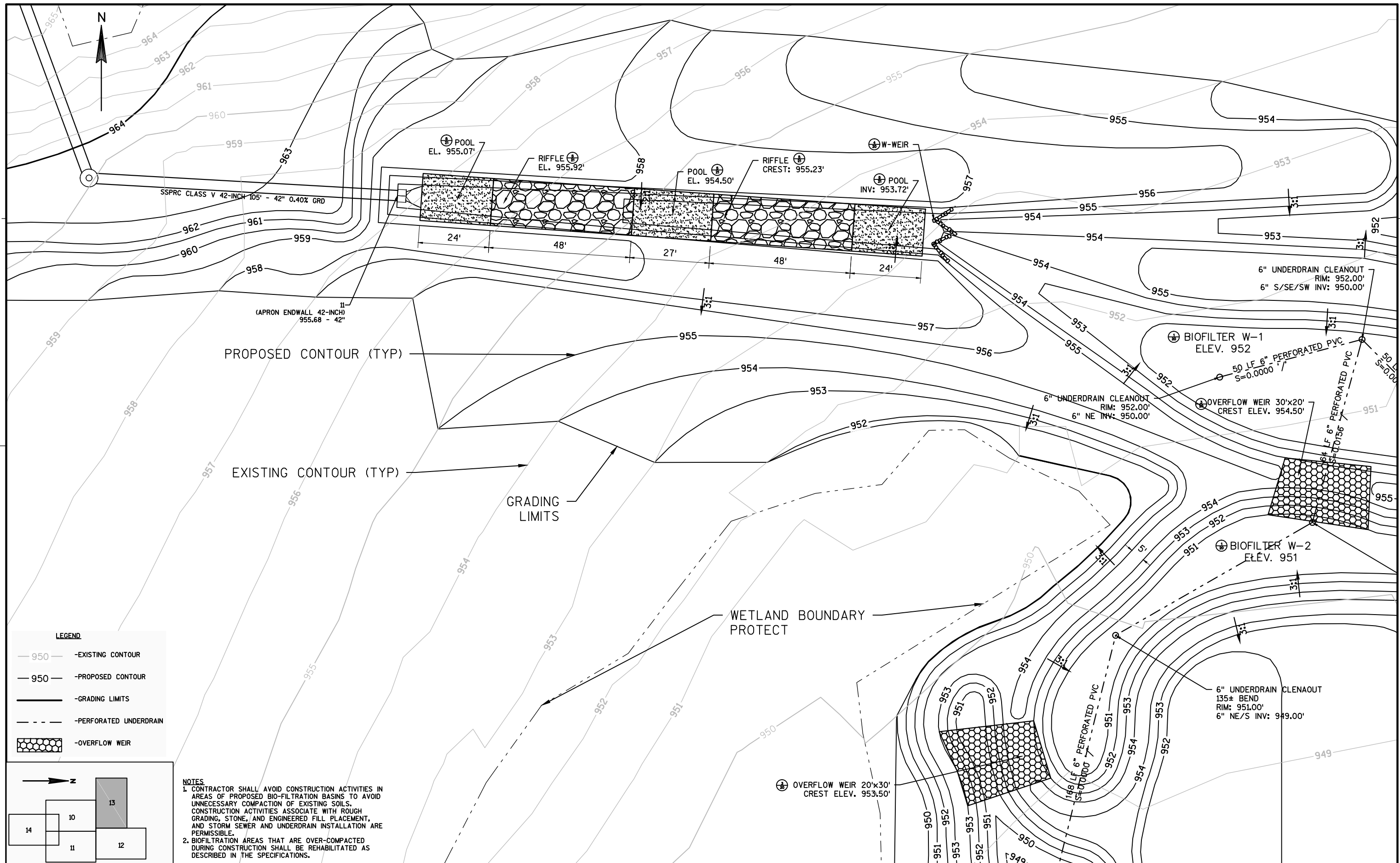


LEGEND

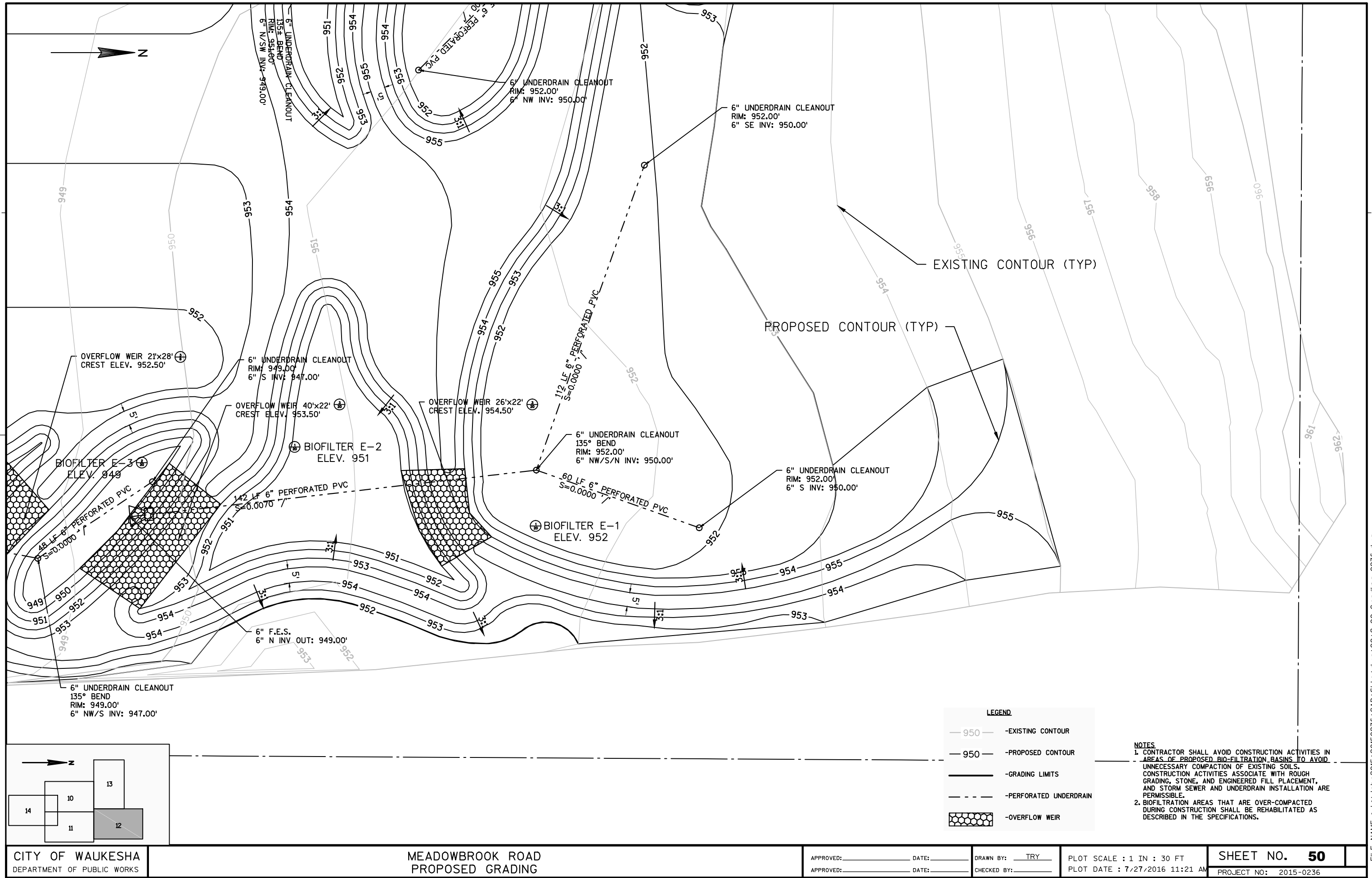
- NOTES
1. CONTRACTOR SHALL AVOID CONSTRUCTION ACTIVITIES IN AREAS OF PROPOSED BIO-FILTRATION BASINS TO AVOID UNNECESSARY COMPACTION OF EXISTING SOILS. CONSTRUCTION ACTIVITIES ASSOCIATE WITH ROUGH GRADING, STONE, AND ENGINEERED FILL PLACEMENT, AND STORM SEWER AND UNDERDRAIN INSTALLATION ARE PERMISSIBLE.
 2. BIOFILTRATION AREAS THAT ARE OVER-COMPACTED DURING CONSTRUCTION SHALL BE REHABILITATED AS DESCRIBED IN THE SPECIFICATIONS.

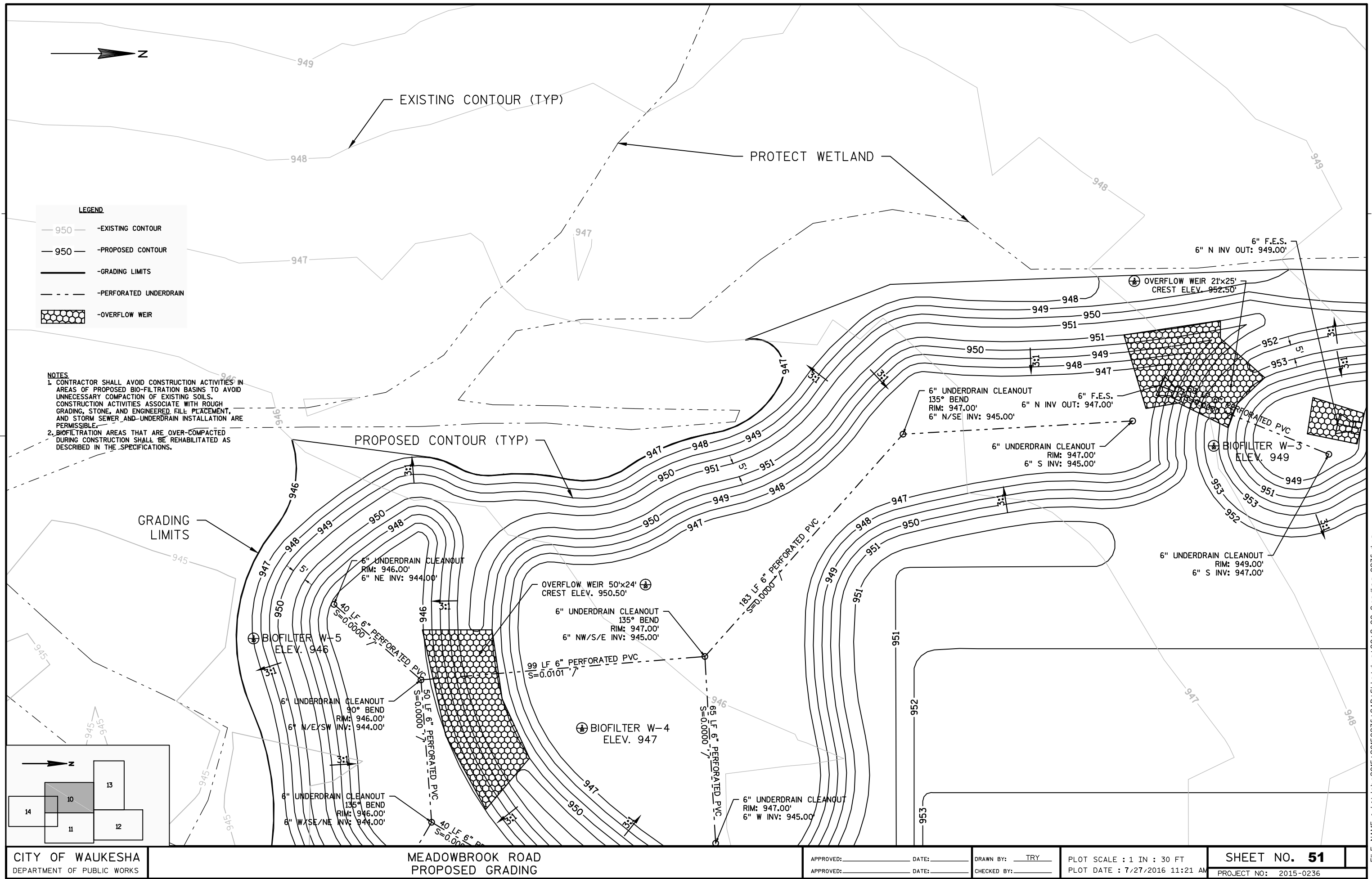


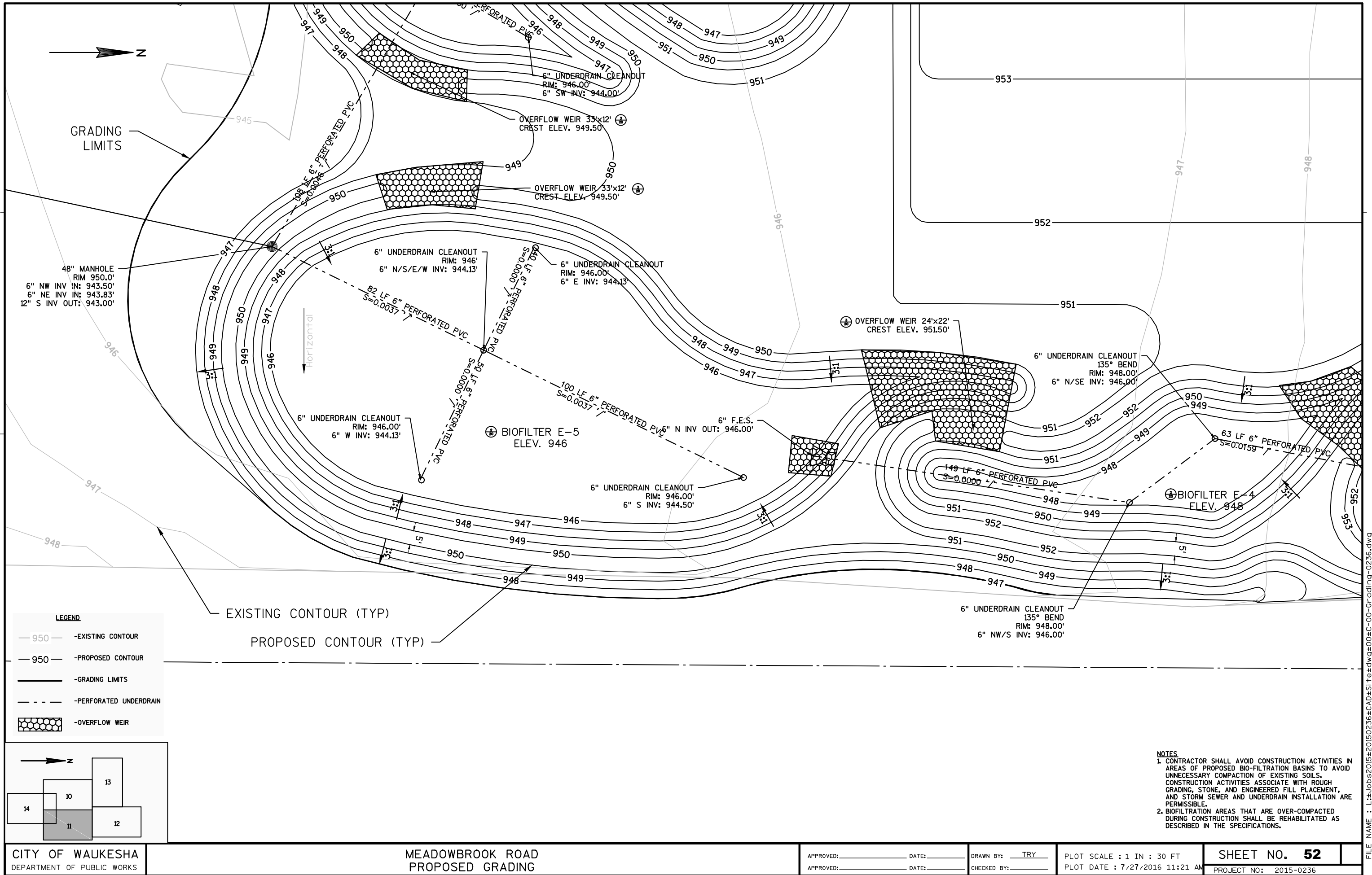
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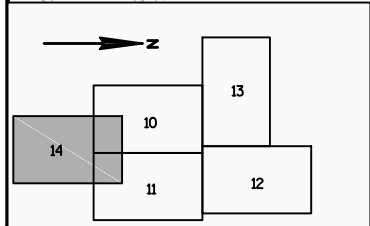
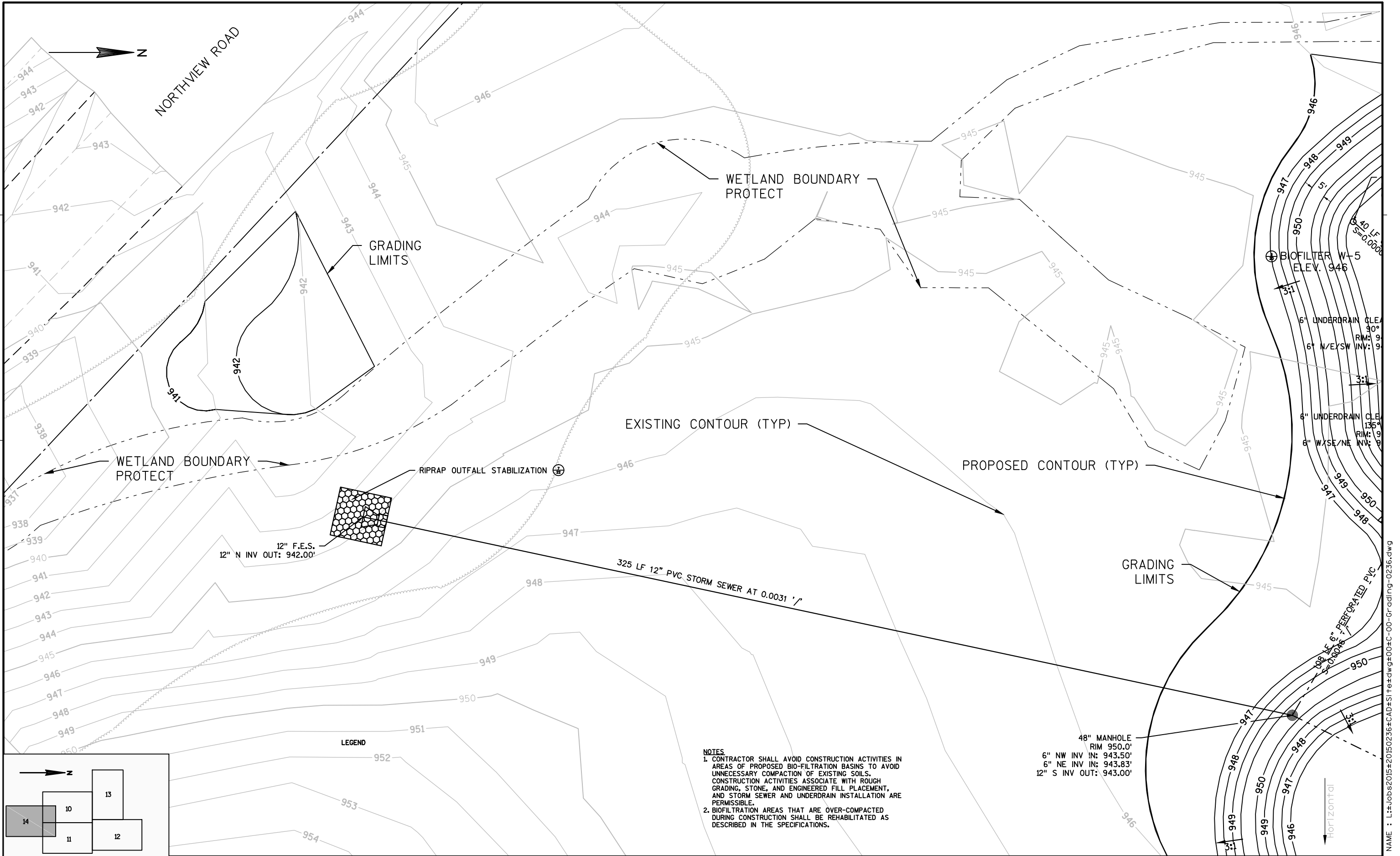
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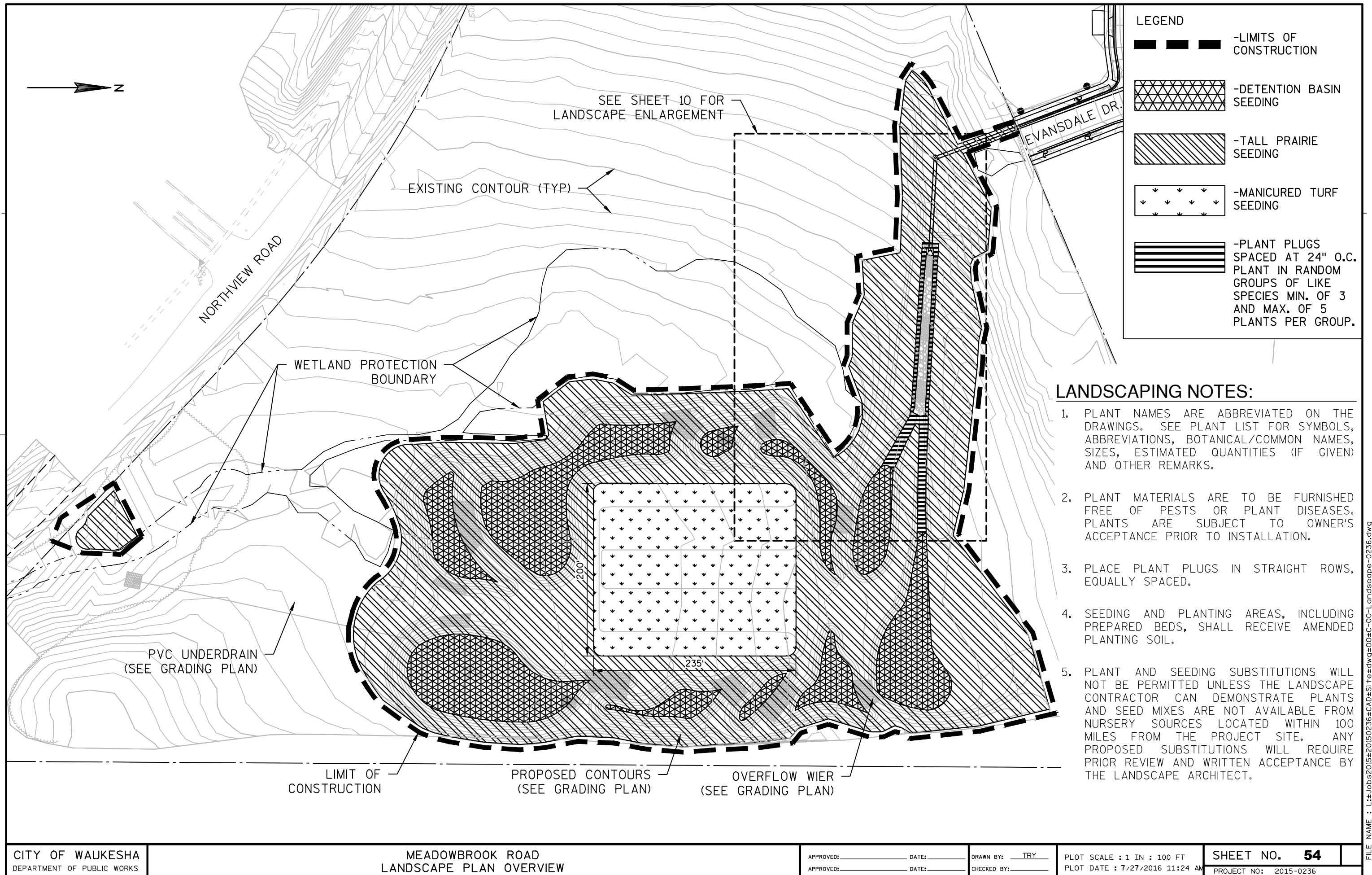


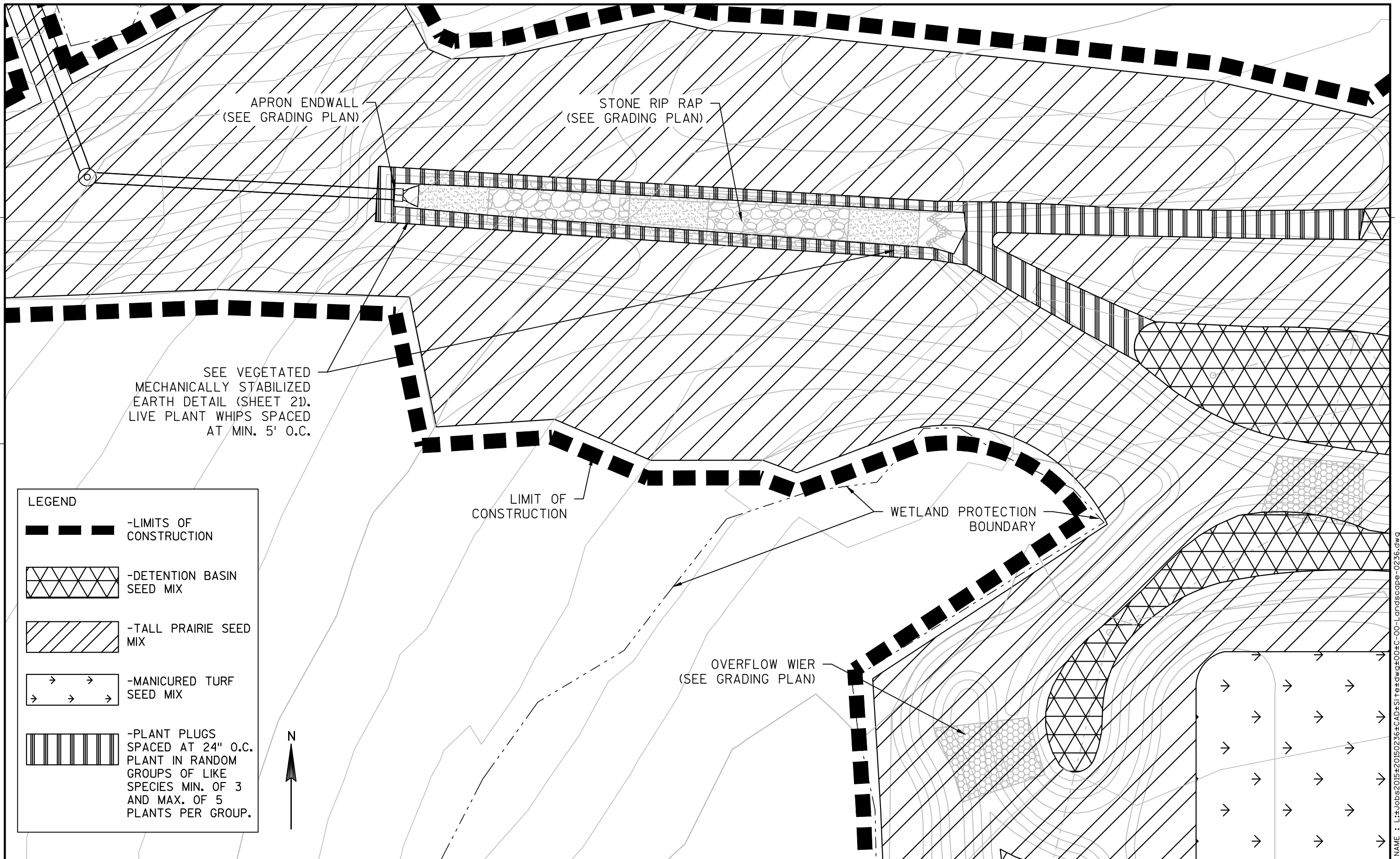


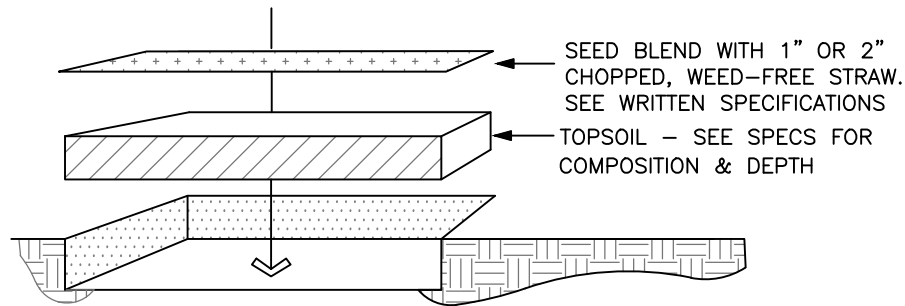
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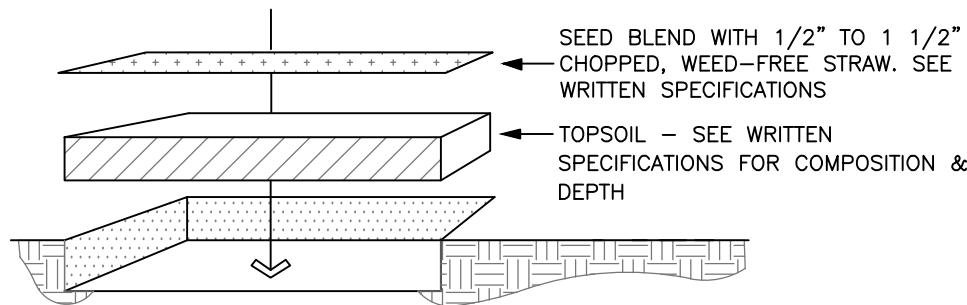






- TOPSOIL SHALL CONFORM TO PROPERTIES AS DESCRIBED IN WRITTEN SPECIFICATION.
- CONTRACTOR TO PROVIDE FINISHED TURF GRADE PER DRAWINGS WITH UNIFORM, NATURAL SLOPES PRIOR TO THE SOWING OF SEED.
- SEED BLEND & APPLICATION PROCEDURES ARE DESCRIBED IN WRITTEN SPECIFICATION.
- SEE LANDSCAPE PLAN FOR LOCATION OF VARIOUS SEED MIXES.
- CONTRACTOR SHALL PROVIDE SEED GERMINATION AND ESTABLISH VIGOROUS PLANT GROWTH AS DESCRIBED IN WRITTEN SPECIFICATION.
- CONTRACTOR SHALL PERFORM MAINTENANCE SERVICES IN ORDER TO PROVIDE ADEQUATE WEED CONTROL. SEE WRITTEN SPECIFICATION FOR DETAILED MAINTENANCE SERVICES AND DURATION.

1 PRAIRIE / WILDFLOWER SEEDING



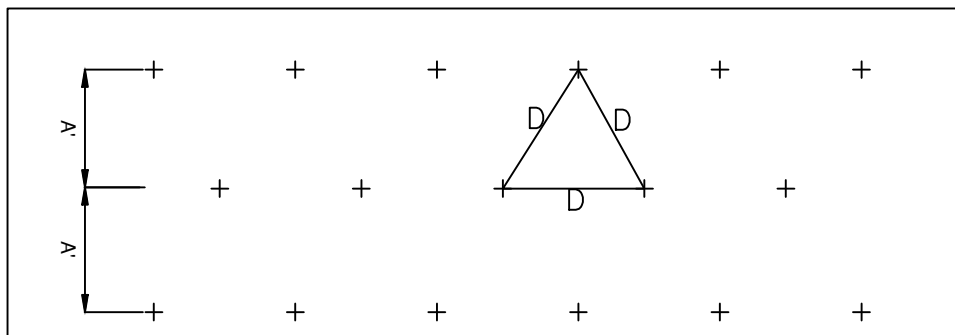
- TOPSOIL SHALL CONFORM TO PROPERTIES AS DESCRIBED IN WRITTEN SPECIFICATION.
- CONTRACTOR TO PROVIDE FINISHED TURF GRADE PER DRAWINGS WITH UNIFORM, NATURAL SLOPES PRIOR TO THE SOWING OF SEED. SEED BLEND & APPLICATION PROCEDURES ARE DESCRIBED IN WRITTEN SPECIFICATION
- LANDSCAPE CONTRACTOR SHALL ESTABLISH VIGOROUS GROWTH AND MOW & MAINTAIN AS DESCRIBED IN WRITTEN SPECIFICATION.

2 MANICURED TURF SEEDING

PLANT LIST

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	MATURE SIZE
CSB	Cornus sericea	Red Osier Dogwood	Live Whip	5'	6'-9'h x 8'-12"w
SDC	Salix discolor	Pussy Willow	Live Whip	5'	15'-20'h x 7'-9"w

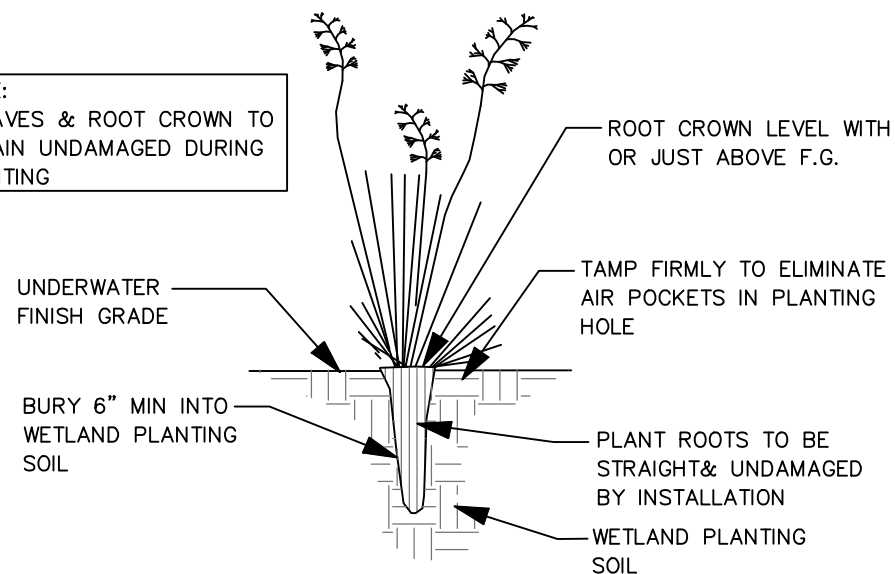
SPACING "D"	ROW "A"	NO. OF PLANTS
24"	20.8"	2.9



SPECIES PLANT LAYOUT

3 PLANT SPACING DIAGRAM FOR PERENNIALS AND ORNAMENTAL GRASSES

NOTE:
-LEAVES & ROOT CROWN TO REMAIN UNDAMAGED DURING PLANTING



4 WETLAND SHELF PLUG PLANTING DETAIL

PLANT PLUG LIST

FORBS	COMMON NAME
Allium cernuum	Nodding Pink Onion
Asclepias incarnata	Red Milkweed
Aster novae-angliae	New England Aster
Cacalia atriplicifolia	Pale Indian Plantain
Eupatorium maculatum	Joe Pye Weed
Eupatorium perfoliatum	Boneset
Helenium autumnale	Dogtooth Daisy
Heliopsis helianthoides	Ox Eye Sunflower
Iris versicolor	Blue Flag Iris
Liatris pycnostachya	Prairie Blazingstar
Liatris spicata	Dense Blazingstar
Monarda fistulosa	Bergamot
Ratibida pinnata	Yellow Coneflower
Rudbeckia hirta	Black Eyed Susan
Rudbeckia subtomentosa	Sweet Black Eyed Susan
Rudbeckia triloba	Brown Eyed Susan
Silphium perfoliatum	Cupplant
Silphium terebinthinaceum	Prairie Dock
Solidago ohioensis	Ohio Goldenrod
Solidago rigida	Stiff Goldenrod
Verbena hastata	Blue Vervain
Vernonia fasciculata	Ironweed
Zizia aurea	Golden Alexanders
TOTAL FORBS	
LEGUMES	
Cassia hebecarpa	Wild Senna
Desmodium canadense	Canada Tick Trefoil
GRASSES, SEDGES & RUSHES	
Andropogon gerardi	Big Bluestem
Carex comosa	Bottlebrush Sedge
Carex hystericina	Porcupine Sedge
Carex scoparia	Lance Fruited Oval Sedge
Carex stipata	Awl Fruited Sedge
Carex vulpinoidea	Fox Sedge
Elymus canadensis	Canada Wild Rye
Elymus virginicus	Virginia Wild Rye
Panicum virgatum	Switchgrass
Scirpus atrovirens	Dark Green Bulrush
Sorghastrum nutans	Indiangrass
Spartina pectinata	Prairie Cordgrass

BIOFILTRATION EROSION CONTROL NOTES

1. CONSTRUCTION SITE EROSION CONTROL AND SEDIMENTATION CONTROL SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF WAUKESHA, AND SHALL EMPLOY EROSION CONTROL METHODS AS SHOWN AND SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR) "CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL TECHNICAL STANDARDS".

2. ALL EROSION CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

3. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED FOR STABILITY AND OPERATION AFTER A RAINFALL OF 0.5 INCHES OR MORE, BUT NO LESS THAN ONCE EVERY WEEK. MAINTENANCE OF ALL EROSION CONTROL STRUCTURES SHALL BE PROVIDED TO INSURE INTENDED PURPOSE IS ACCOMPLISHED. REPAIRS AND MAINTENANCE SHALL BE COMPLETED WITHIN 24 HOURS OF INSPECTION. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP AND REMOVAL OF ALL SEDIMENT WHEN LEAVING PROPERTY. EROSION CONTROL MEASURES MUST BE IN WORKING CONDITION AT END OF EACH WORK DAY.

4. SILT FENCE SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS. SEDIMENT DEPOSITS WILL BE REMOVED FROM BEHIND THE SILT FENCE WHEN DEPOSITS REACH A DEPTH OF 6 INCHES. THE SILT FENCE WILL BE REPAIRED OR REPLACED AS NECESSARY TO MAINTAIN A BARRIER.

5. FILTER FABRIC SHALL BE INSTALLED BENEATH INLET COVERS TO TRAP SEDIMENT AS PER INLET PROTECTION DETAIL IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS.

6. EROSION CONTROL MEASURES SHALL BE MAINTAINED ON A CONTINUING BASIS UNTIL SITE IS FULLY STABILIZED.

7. PERIODIC STREET SWEEPING SHALL BE COMPLETED TO MAINTAIN THE PUBLIC STREET FREE OF DUST AND DIRT.

8. SILT FENCE SHALL BE INSTALLED IN HORSESHOE FASHION AROUND ALL TOPSOIL AND FILL STOCKPILES. NOTIFY CITY OF WAUKESHA OF ANY NEW STOCKPILE LOCATIONS.

9. SITE DEWATERING. WATER PUMPED FROM THE SITE SHALL BE TREATED BY SEDIMENT BASINS OR OTHER APPROPRIATE BEST MANAGEMENT PRACTICES SPECIFIED IN THE WDNR "CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL TECHNICAL STANDARDS". WATER SHALL NOT BE DISCHARGED IN A MANNER THAT CAUSES EROSION OF THE SITE, ADJACENT SITES, OR RECEIVING CHANNELS.
10. WASTE AND MATERIAL DISPOSAL. ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, WASTEWATER, TOXIC MATERIALS, OR HAZARDOUS MATERIALS) SHALL BE PROPERLY DISPOSED AND NOT ALLOWED TO BE CARRIED OFF-SITE BY RUNOFF OR WIND.

11. SEDIMENT CLEANUP. ALL OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF A STORM EVENT SHALL BE CLEANED UP BY THE END OF THE NEXT WORK DAY. ALL OTHER OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE CLEANED UP BY THE END OF THE THE WORK DAY.

12. ALL DISTURBED GROUND LEFT INACTIVE FOR SEVEN OR MORE DAYS SHALL BE STABILIZED BY TEMPORARY OR PERMANENT SEEDING, AND MULCHING SODDING, COVERING WITH TARPS, OR EQUIVALENT BEST MANAGEMENT PRACTICES. IF TEMPORARY SEEDING IS USED, A PERMANENT COVER SHALL ALSO BE REQUIRED AS PART OF THE FINAL SITE STABILIZATION. SEEDING OR SODDING SHALL BE REQUIRED AS PART OF THE FINAL SITE STABILIZATION.

13. PERMANENT SEEDING SHALL BE ESTABLISHED AS SPECIFIED. IF PERMANENT SEEDING IS NOT ESTABLISHED, TEMPORARY SEEDING SHALL BE ESTABLISHED NO LATER THAN OCTOBER 15TH. ALL SEEDED AREAS MUST BE MULCHED AT A RATE OF 1.5 TO 2 TONS PER ACRE AND ANCHORED BY EITHER CRIMPING OR BY APPLYING A TACKIFIER.

14. REFER TO LANDSCAPE PLAN AND SPECIFICATION FOR TEMPORARY AND PERMANENT SEED MIX.

15. SOIL OR DIRT STORAGE PILES SHALL BE LOCATED A MINIMUM OF TWENTY-FIVE FEET FROM ANY DOWNSLOPE ROAD, LAKE, STREAM, WETLAND, OR DRAINAGE CHANNEL. STRAW BALE OR FILTER FABRIC FENCES SHALL BE PLACED ON THE DOWN SLOPE SIDE OF THE PILE. IF REMAINING FOR MORE THAN THIRTY DAYS. PILES SHALL BE STABILIZED BY MULCHING, VEGETATIVE COVER, TARPS, OR OTHER MEANS.

16. WHEN THE DISTURBED AREA HAS BEEN STABILIZED BY PERMANENT VEGETATION OR OTHER MEANS, TEMPORARY BEST MANAGEMENT PRACTICES SUCH AS FILTER FABRIC FENCES, STRAW BALES, SEDIMENT AND SEDIMENT TRAPS SHALL BE REMOVED.

17. NOTIFY THE CITY WITHIN TWO WORKING DAYS OF COMMENCING ANY LAND DEVELOPMENT OR LAND DISTURBING ACTIVITY.

18. NOTIFY THE CITY OF COMPLETION OF ANY BEST MANAGEMENT PRACTICES WITHIN THE NEXT WORKING DAY AFTER THEIR INSTALLATION.
19. OBTAIN PERMISSION IN WRITING FROM THE CITY OF WAUKESHA ENGINEERING DEPARTMENT PRIOR TO MODIFYING THE EROSION CONTROL PLAN. NOTIFY WDNR AT LEAST FIVE WORKING DAYS PRIOR TO IMPLEMENTING CHANGES TO THE EROSION CONTROL PLAN.

20. REPAIR ANY SILTATION OR EROSION DAMAGE TO ADJOINING SURFACES AND DRAINAGE WAYS RESULTING FROM LAND DEVELOPMENT OR LAND DISTURBING ACTIVITIES.

21. KEEP A COPY OF THE EROSION CONTROL PLAN ON SITE. INTERSECTING DIRECTIONS.

REMOVAL NOTES

- 1. EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AND DISCREPENCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO COMMENCING WORK.
- 2. CONTRACTOR SHALL REFER TO REMOVAL SHEETS FOR ALL STORM SEWER REMOVALS.

UTILITY NOTES

- 1. CONTRACTOR SHALL VERIFY ELEVATION OF EXISTING INVERTS PRIOR TO INSTALLATION OF PROPOSED UTILITIES.
- 2. CONTRACTOR SHALL VERIFY ALL PROPOSED RIM ELEVATIONS PRIOR TO ORDERING AND CONSTRUCTING STORM STRUCTURES. NOTIFY ENGINEER OF ANY DISCREPANCIES.
- 3. CONTRACTOR SHALL AT WATER MAIN CROSSINGS, CENTER ONE FULL LENGTH OF WATER PIPE ON SEWER, SUCH THAT BOTH JOINTS WILL BE AS FAR FROM SEWER AS POSSIBLE, UNLESS OTHERWISE NOTED.
- 4. CONTRACTOR SHALL COORDINATE WITH LOCAL GAS, TELEPHONE, AND ELECTRICAL UTILITIES FOR EXACT LOCATION, SIZE AND DEPTH OF EXISTING AND/OR RELOCATED SERVICE.
- 5. RIM ELEVATIONS IN CURB AND GUTTER ARE AT FLOW LINE OF FACE OF CURB.
- 6. RIM ELEVATIONS WITHIN PAVEMENTS ARE AT CENTER OF STRUCTURE.
- 7. RIM ELEVATIONS FOR STRUCTURE 42, 4, AND 8 ARE AT CASTING AS INDICATED IN STRUCTURE CONSTRUCTION DETAILS.
- 8. STATION AND OFFSET FOR DIVERSION STRUCTURE 8 AND STRUCTURE 42 ARE AT CENTER OF STRUCTURE.
- 9. STATION AND OFFSET FOR STRUCTURE 4 HAVE CALLOUTS AT THE MIDDLE INSIDE FACE OF THE INCOMING AND OUTGOING PIPES. SEE STRUCTURE 4 CONSTRUCTION DETAILS FOR EXACT STATION AND OFFSETS.
- 10. STATION AND OFFSET FOR STRUCTURE 41 IS AT BACK OF CURB FOR CENTER OF CASTING R-3293-2. SEE STRUCTURE 41 CONSTRUCTION DETAIL FOR STATION AND OFFSETS.
- 11. ALL CATCH BASINS SHALL MEET WISDOT STANDARDS, CATCH BASINS 2x3-FT, WITH TYPE H FRAME AND GRATE UNLESS OTHERWISE NOTED.

- 12. ALL CATCH BASINS SHALL HAVE 2-FOOT SUMP BELOW LOWEST INVERT.
- 13. ALL PIPES WITH A DIAMETER OF 48-INCHES OR LESS HAVE LENGTHS FROM CENTER TO CENTER OF STRUCTURE. ALL PIPES WITH A DIAMETER LARGER THAN 48-INCHES HAVE PIPE LENGTHS FROM INSIDE FACE TO INSIDE FACE OF STRUCTURE, UNLESS STRUCTURE IS A IN-LINE MANHOLE OR IN-LINE INLET.
- 14. ALL STRUCTURES WITHIN CURB AND GUTTER HAVE STATION AND OFFSET AT FACE OF CURB, UNLESS OTHERWISE NOTED.
- 15. ALL STRUCTURES OUT OF CURB AND GUTTER HAVE STATION AND OFFSET AT CENTER OF STRUCTURE, UNLESS OTHERWISE NOTED.
- 16. CONTRACTOR SHALL REFER TO STORM SEWER CONSTRUCTION DETAIL SHEETS FOR STRUCTURE 4, 8, 41, AND 42.
- 17. STRUCTURES 4, 8, 41, AND 42 SHALL BE PLACED ON BEDDING MATERIAL OF AT LEAST 6-INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF BASE. CONTRACTOR SHALL CONFIRM WITH GEOTECHNICAL ENGINEER SUBSOIL IS SUITABLE FOR ALL STRUCTURES. IF SUBSOIL IS NOT SUITABLE, CONTRACTOR SHALL PREPARE SUBGRADE TO SATISFACTION OF GEOTECHNICAL ENGINEER.
- 18. CONTRACTOR SHALL REFER TO STORM SEWER CONSTRUCTION DETAIL SHEETS FOR ALL INLINE MANHOLES AND INLINE INLETS.
- 19. PROPOSED 12'x5', 12'x4', AND 8'x4' PRECAST BOX CULVERTS SHALL MEET THE ASTM C1433 AND C1577 STANDARDS.

STRUCTURAL NOTES

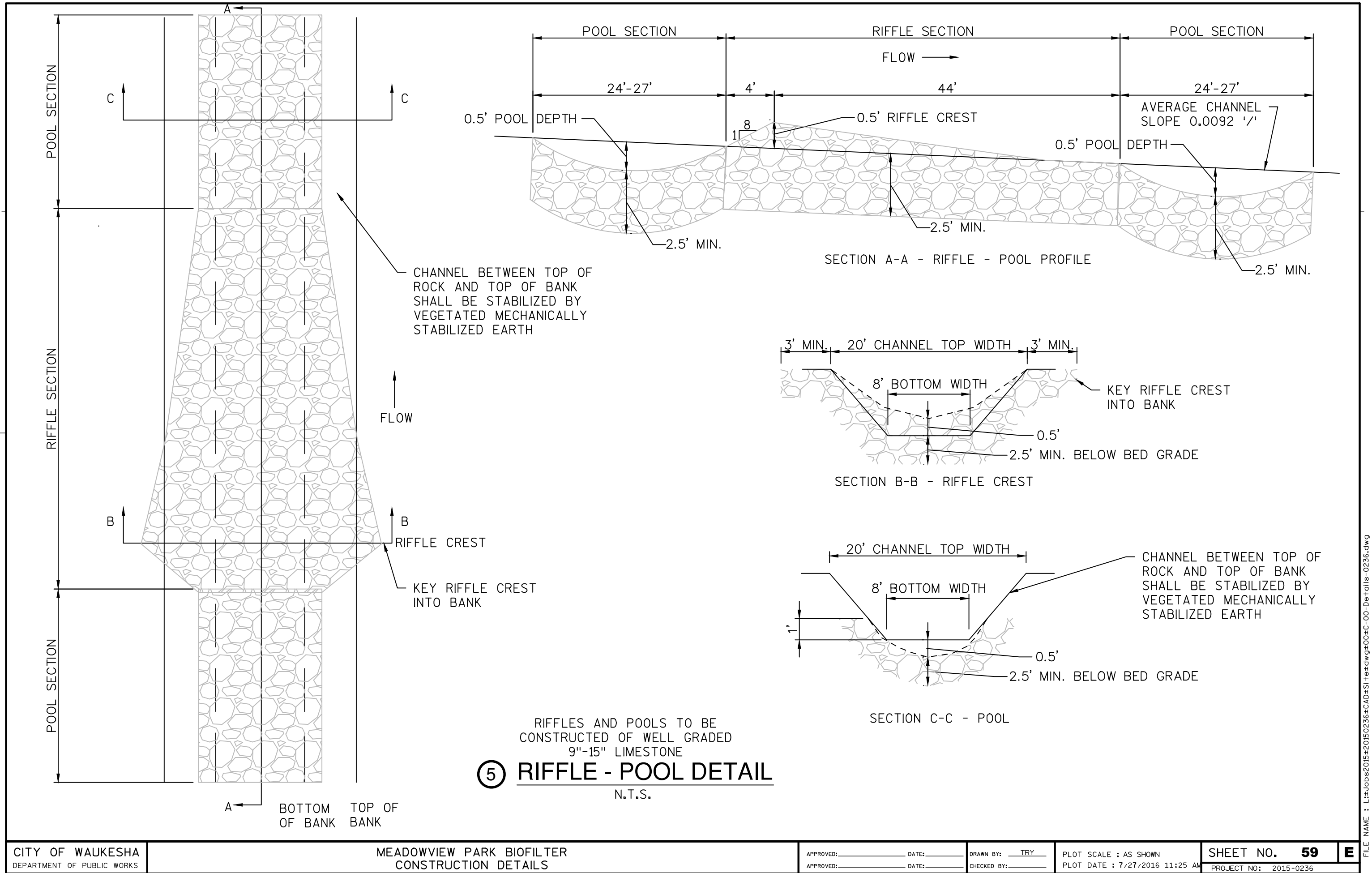
- 1. DESIGN IS IN ACCORDANCE WITH ACI 530-06.
- 2. MINIMUM 28 DAY CONCRETE CYLINDER STRENGTH SHALL BE 4000 PSI WITH A MAXIMUM WATER/CEMENT RATIO OF 0.45.
- 3. MAXIMUM FLYASH REPLACEMENT 25%. MINIMUM AIR CONTENT 5.5%.
- 4. REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60.
- 5. CONTRACTOR IS RESPONSIBLE FOR ALL MEAN AND METHODS OF CONSTRUCTION AND ALL JOB SITE SAFETY.

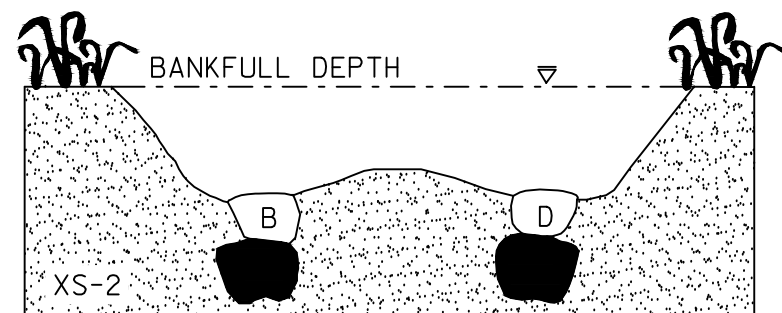
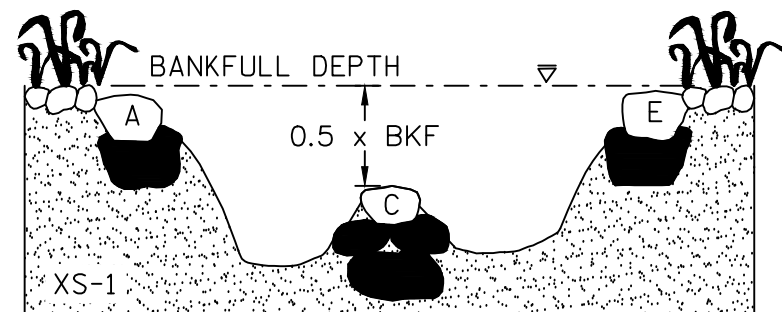
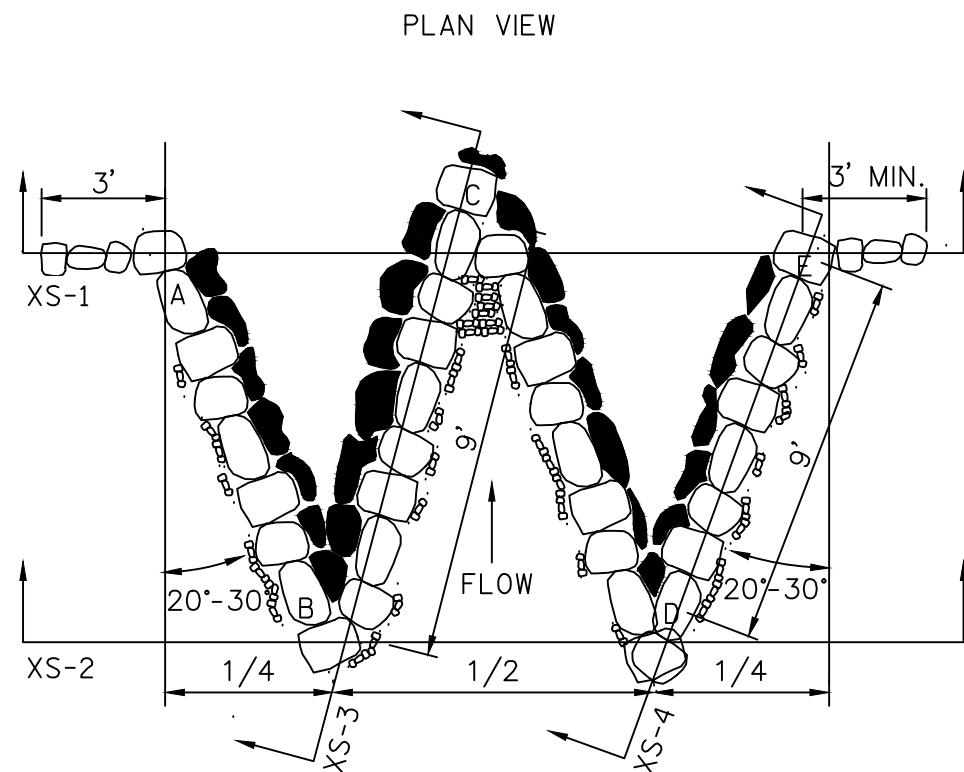
STRUCTURAL EARTHWORK NOTES

- 1. BASES SHALL BE CAST ON UNDISTURBED SUBSOIL. IF MINIMUM 2000 PSF DESIGN CAPACITY IS NOT ENCOUNTERED AT THE ELEVATIONS SHOWN ADDITIONAL BASE PREPARATION MAY BE REQUIRED. CONSULT GEOTECHNICAL ENGINEER BEFORE PROCEEDING.
- 2. BACKFILL EVENLY ON EACH SIDE OF STRUCTURES.
- 3. BACKFILL AGAINST STRUCTURES SHALL BE GRANULAR FILL.

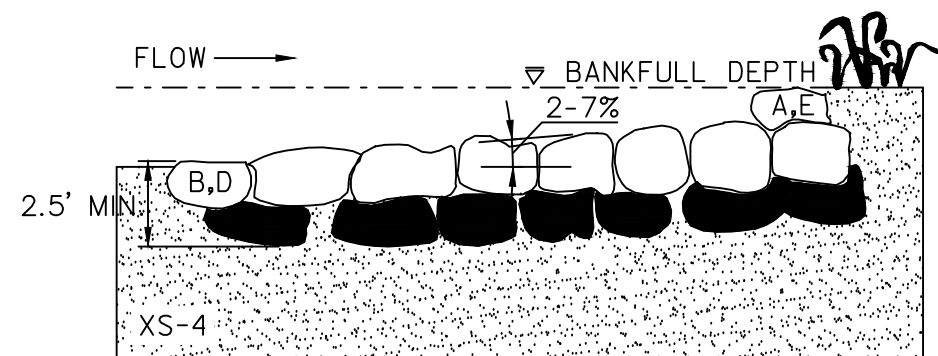
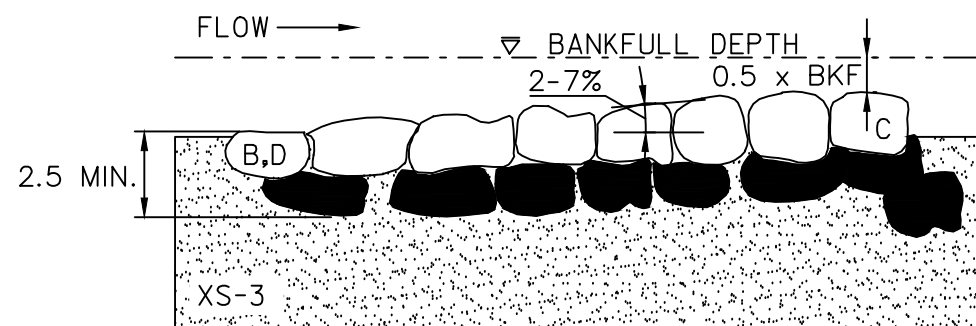
STRUCTURAL CONCRETE NOTES

- 1. FORMWORK SHALL BE DESIGNED IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE.
- 2. REINFORCING STEEL SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE UNLESS OTHERWISE NOTED.
- 3. LAP ALL WALL BARS 36 DIAMETERS.
- 4. CONCRETE PROTECTION FOR REINFORCING BARS SHALL BE IN ACCORDANCE WITH ACI AS FOLLOWS
 - BASES 3"
 - SLABS & WALLS 2"
- 5. CONCRETE SHALL BE TESTED BY THE OWNER'S TESTING LAB. SEE SPECIFICATIONS FOR REQUIREMENTS.
- 6. CALCIUM CHLORIDE SHALL NOT BE USED IN CONCRETE MIXES.





POINT	APPROXIMATE ELEVATION
A	954.6
B	954.0
C	954.3
D	954.0
E	954.6

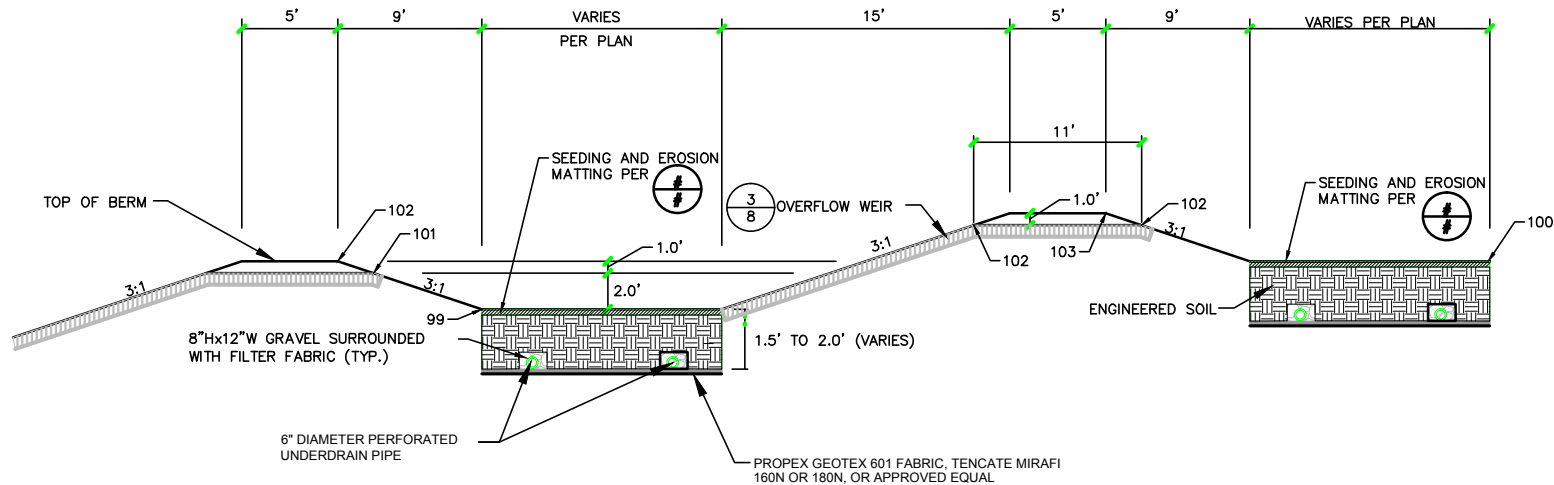


PLAN, CROSS SECTION, AND PROFILE VIEW OF THE W-WEIR
W-WEIR SHALL BE CONSTRUCTED OF WELL GRADED, 9"-15" LIMESTONE

④ W-WEIR

N.T.S.

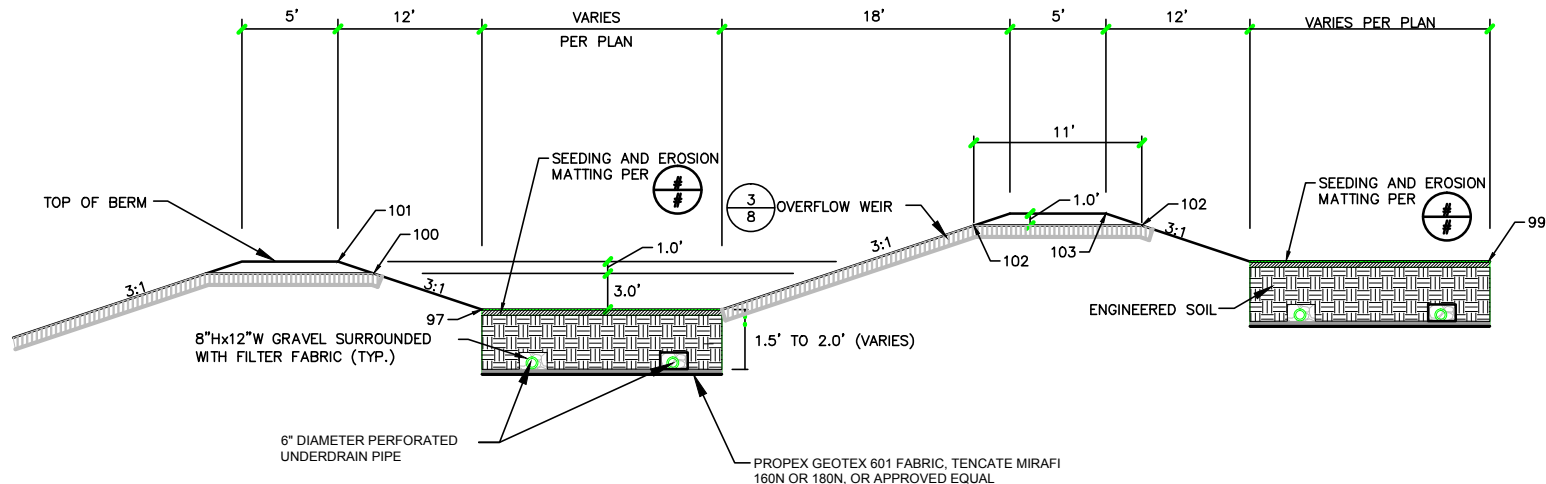
- LEGEND
-  SEEDING AND STRAW
-  ENGINEERED SOIL (70-85% COARSE SAND AND 15-30% COMPOST BY VOLUME)



- NOTES:
- ELEVATIONS SHOWN ARE RELATIVE.
 - VARY DEPTH OF ENGINEERED SOIL LAYER BASED ON SLOPE OF UNDERDRAIN SYSTEM AS SHOWN ON PLANS AND IN BIO-FILTRATION BASIN DATA TABLE.

1 BIO-FILTRATION TYPICAL SECTION E-1, E-2, W-1, W-2

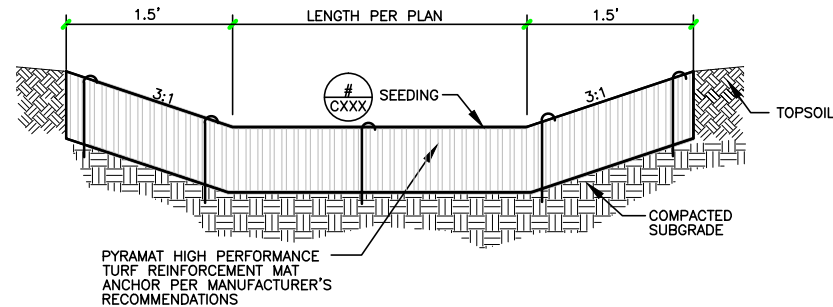
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- NOTES:
- ELEVATIONS SHOWN ARE RELATIVE.
 - VARY DEPTH OF ENGINEERED SOIL LAYER BASED ON SLOPE OF UNDERDRAIN SYSTEM AS SHOWN ON PLANS AND IN BIO-FILTRATION BASIN DATA TABLE.

2 BIO-FILTRATION TYPICAL SECTION W-3, W-4, W-5, E-3, E-4, E-5

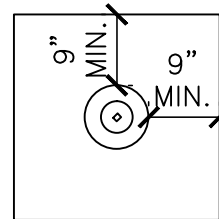
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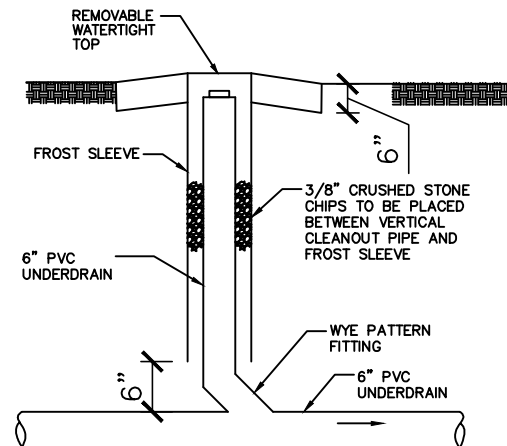
- NOTES:
- LENGTH PER PLANS

3 BIO-FILTRATION OVERFLOW WEIR

N.T.S.



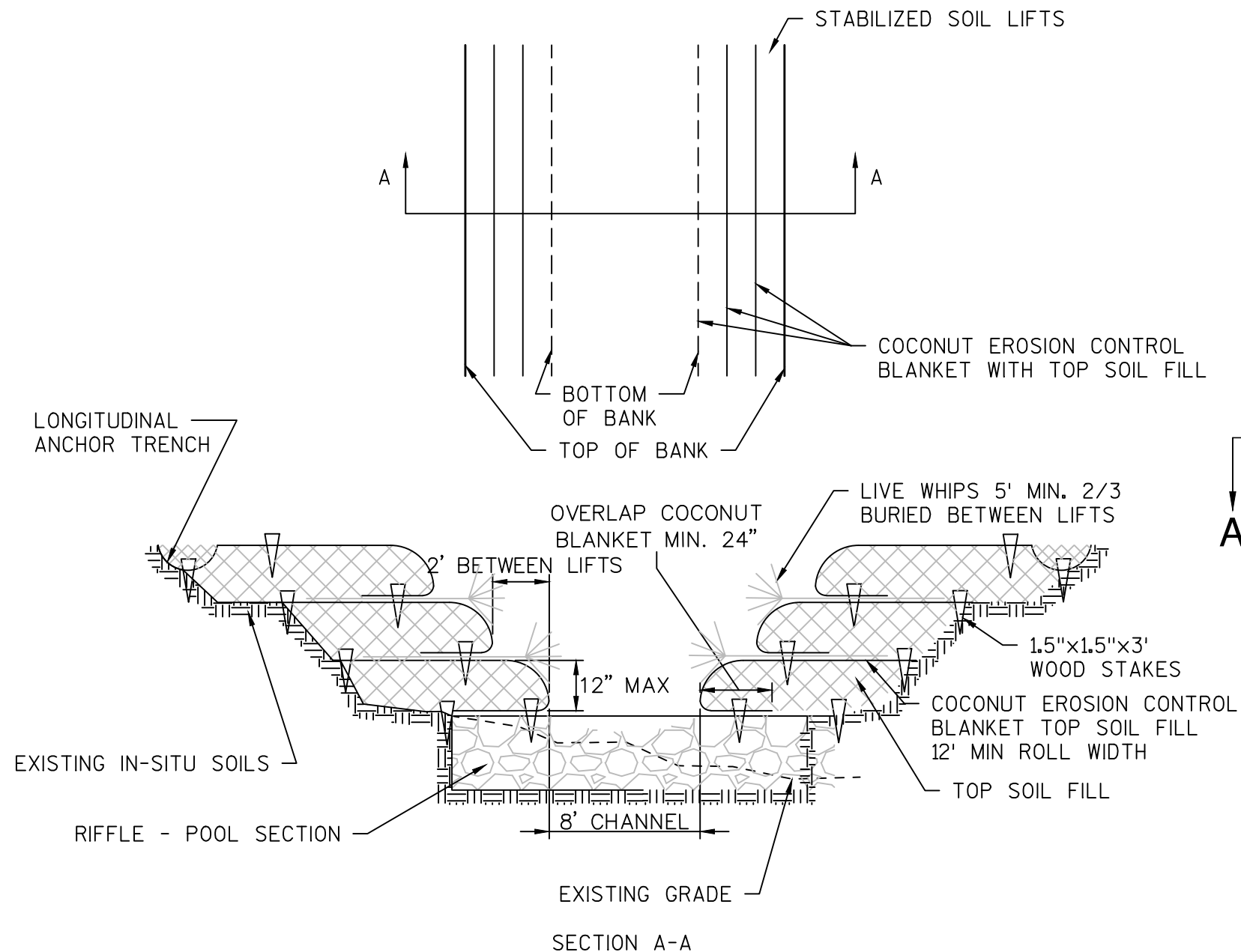
PLAN VIEW



SECTION VIEW

4 CLEANOUT DETAIL

N.T.S.

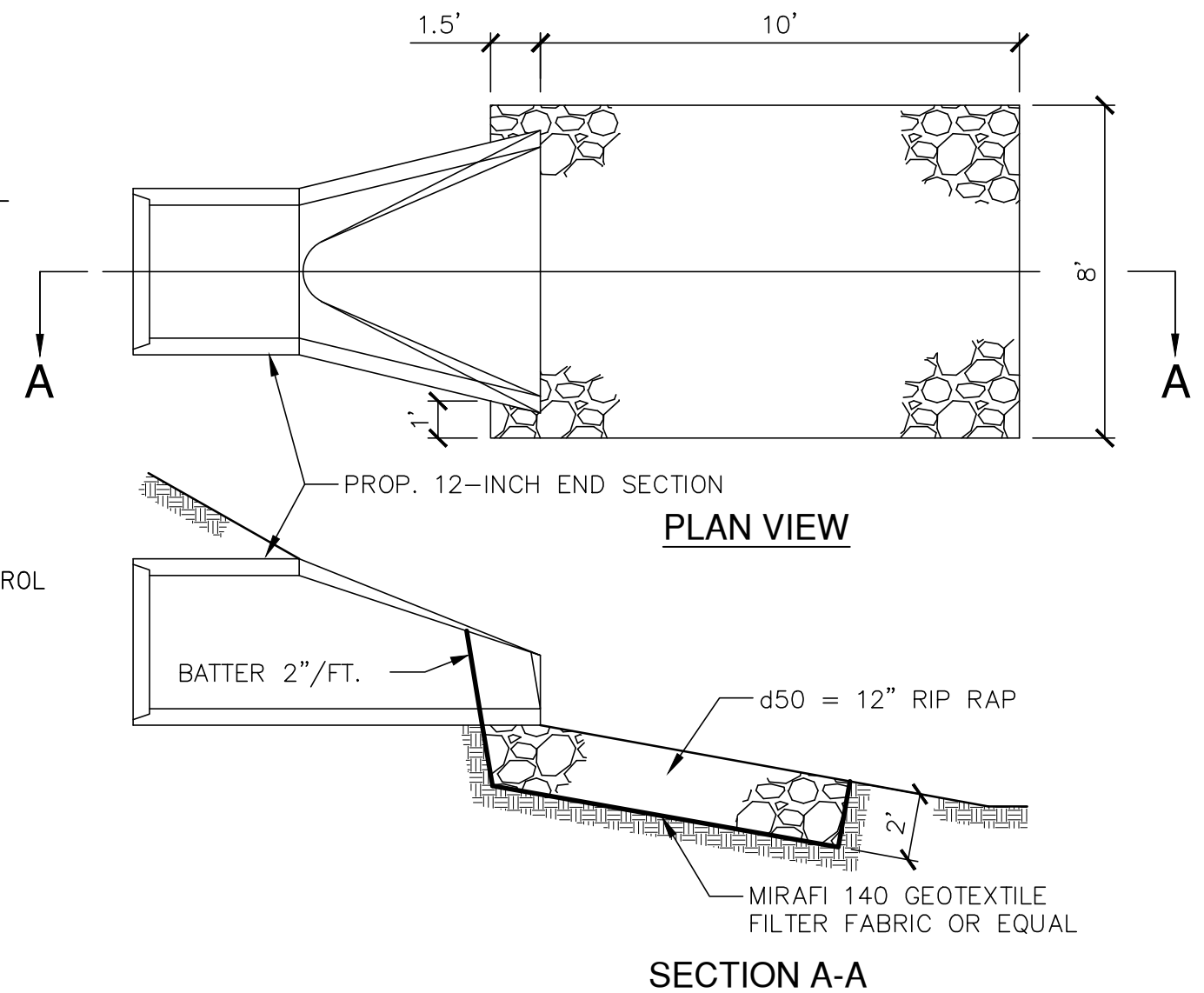


NOTES:
SOIL LIFT SHALL BE PLANTED WITH PLUGS IN ACCORDANCE WITH PLANTING PLAN

LIVE WHIPS SHALL BE IN ACCORDANCE WITH PLANTING PLAN

⑥ VEGETATED MECHANICALLY STABILIZED EARTH DETAIL

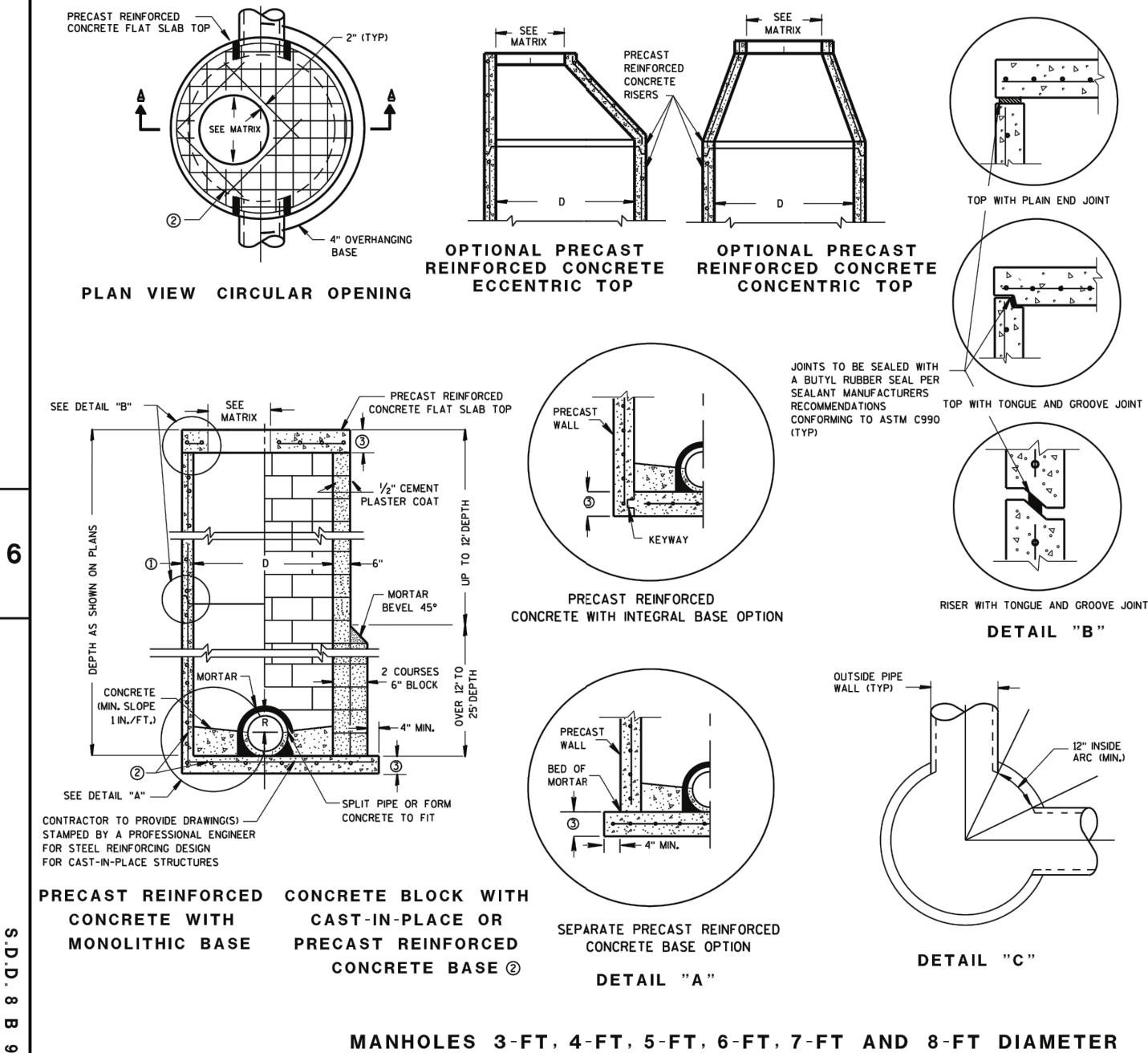
N.T.S.



⑦ 12-INCH FLARED END SECITON AND RIPRAP OUTFALL STABILIZATION DETAIL

N.T.S.

8B9: Manholes 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, & 8-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 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 GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND 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 DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2" 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.

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

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

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 "C".

- MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.
- FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

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	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

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

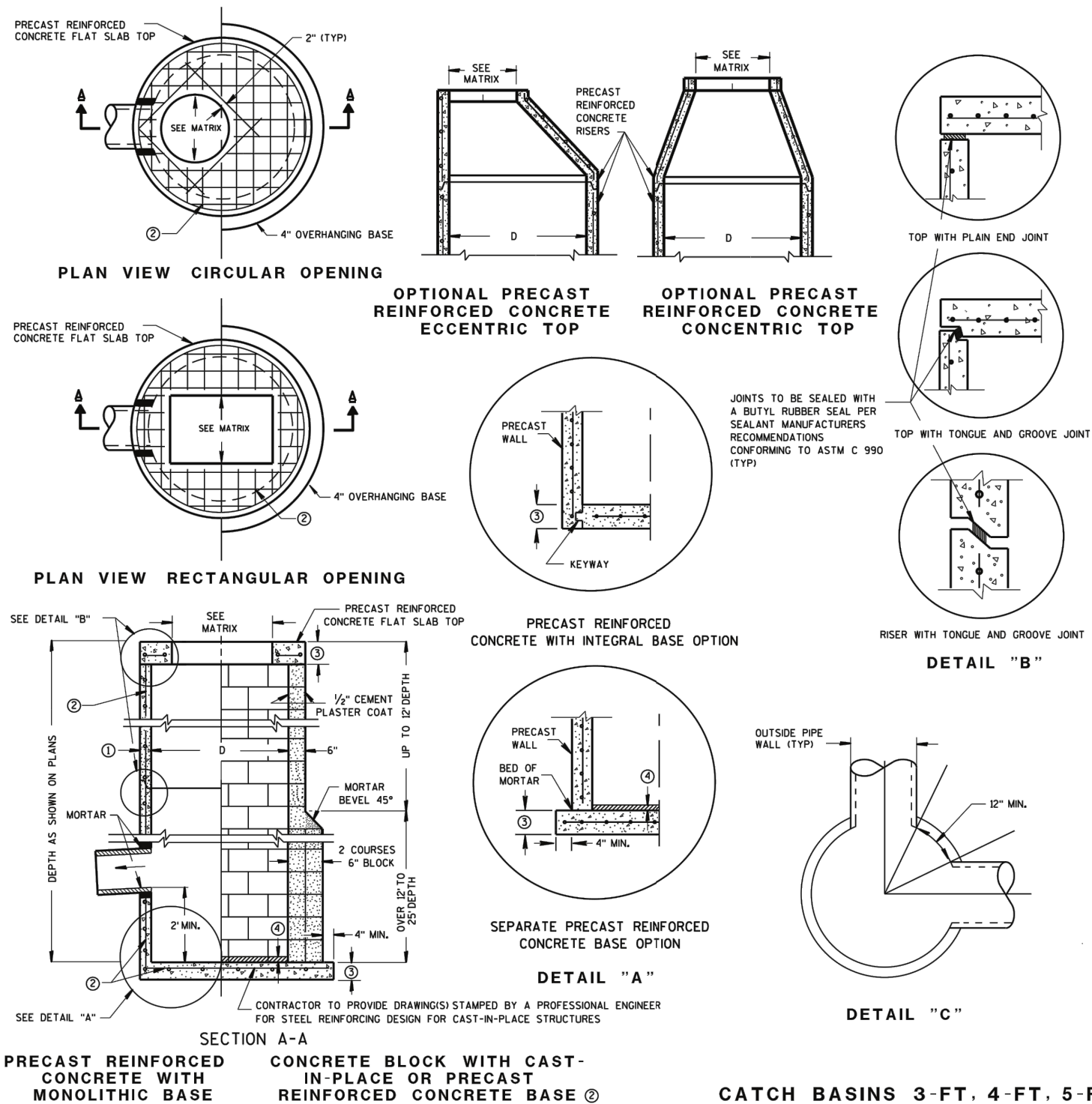
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 /s/ Jerry H. Zoog
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

NOTES

- ALL MANHOLES SHALL BE PRECAST CONCRETE STRUCTURES. NO BLOCK MANHOLES.

8A8: Catch Basins 3-FT, 4-FT, 5-FT & 6-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 CATCH BASIN 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 GRANULAR 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. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND 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 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 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.

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 "C".

- MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT AND 7 INCHES FOR 6-FT DIAMETER PRECAST CATCH BASINS.
- FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".
- 1" CONCRETE KEY POURED AFTER INSTALLATION. 2" SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER OPENING MATRIX

CATCH BASIN SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
3-FT	2X2	X	X					X		X		
	2 DIA.				X							X
4-FT-6-FT	2X2	X	X					X		X		
	2X2.5			X					X	X	X	
	2 DIA.				X							X
	2X3						X					
	2.5X3					X						

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

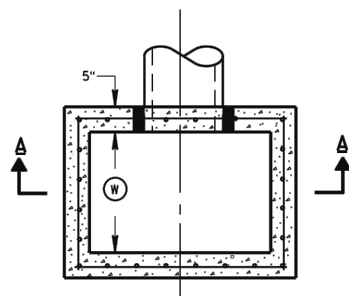
APPROVED
6/5/2012
DATE
FHW
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

NOTES

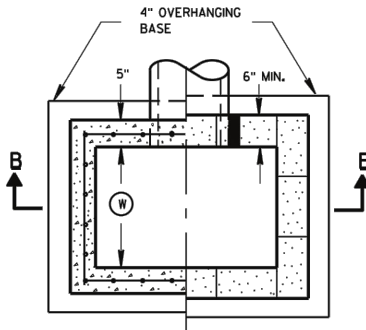
- ALL CATCH BASINS SHALL BE PRECAST CONCRETE STRUCTURES. NO BLOCK CATCH BASINS.



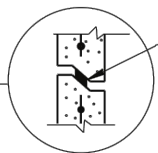
8A9: Catch Basins 2x3-FT & 2.5x3-FT



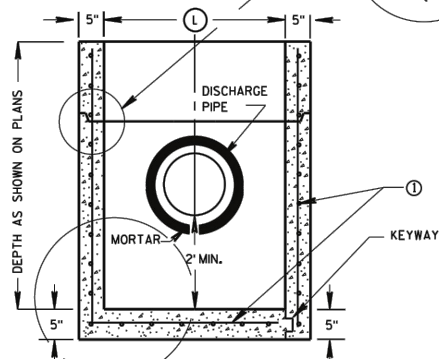
PLAN VIEW



PLAN VIEW

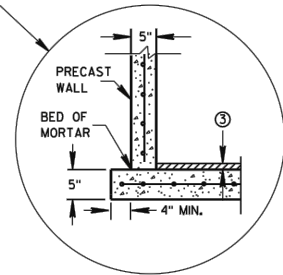


RISER JOINTS TO BE SEALED
 WITH A BUTYL RUBBER SEAL
 PER SEALANT MANUFACTURERS
 RECOMMENDATIONS CONFORMING
 TO ASTM C 990 (TYP)

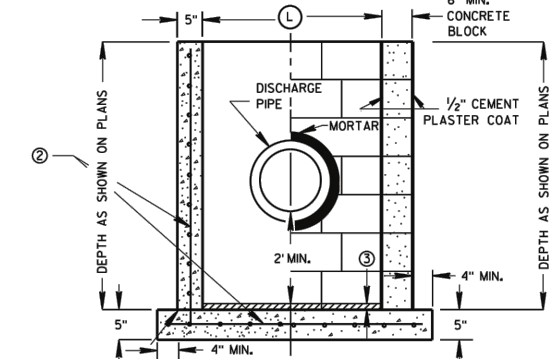


PRECAST REINFORCED
 CONCRETE WITH
 MONOLITHIC BASE

SECTION A-A



SEPARATE PRECAST REINFORCED
 CONCRETE BASE OPTION



CAST-IN-PLACE REINFORCED
 CONCRETE

SECTION B-B

CATCH BASINS 2X3-FT AND 2.5X3-FT

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 CATCH BASIN 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 PRECAST CATCH BASIN UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES 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 GRANULAR 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.

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

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND 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 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 CATCH BASINS 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.

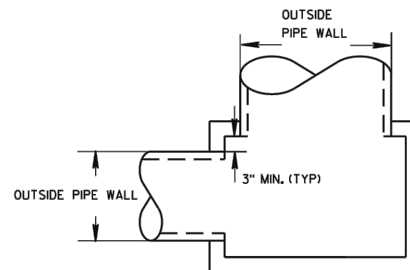
③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2" SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

CATCH BASIN SIZE	INLET COVER TYPE		F	ALL H'S
	WIDTH (W) (FT)	LENGTH (L) (FT)		
2X3-FT	2	3		X
2.5X3-FT	2.5	3	X	

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

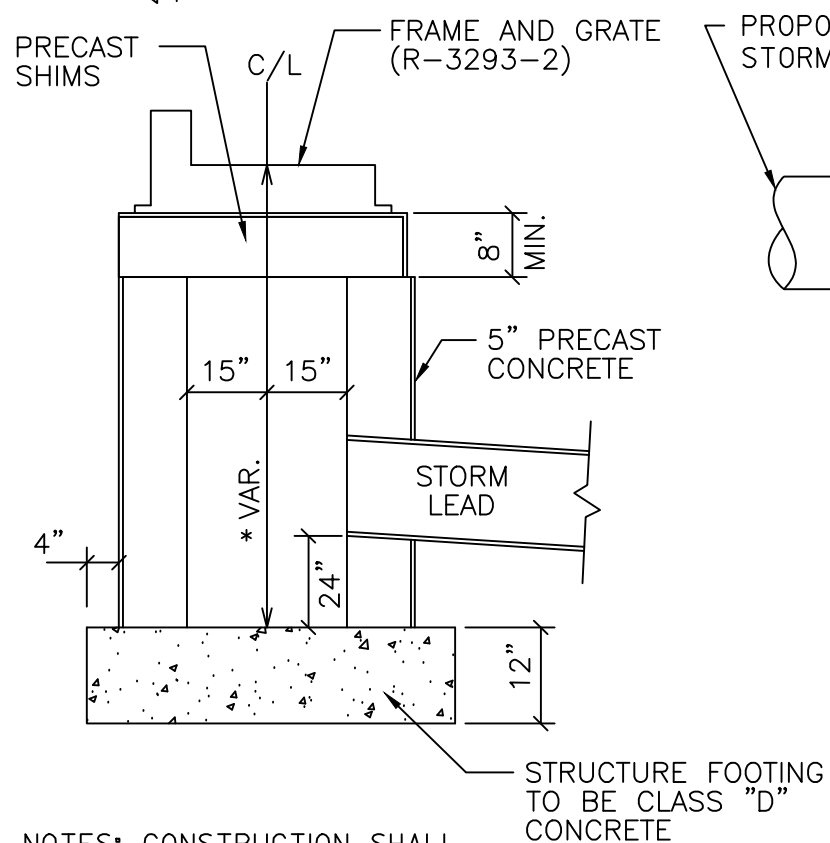
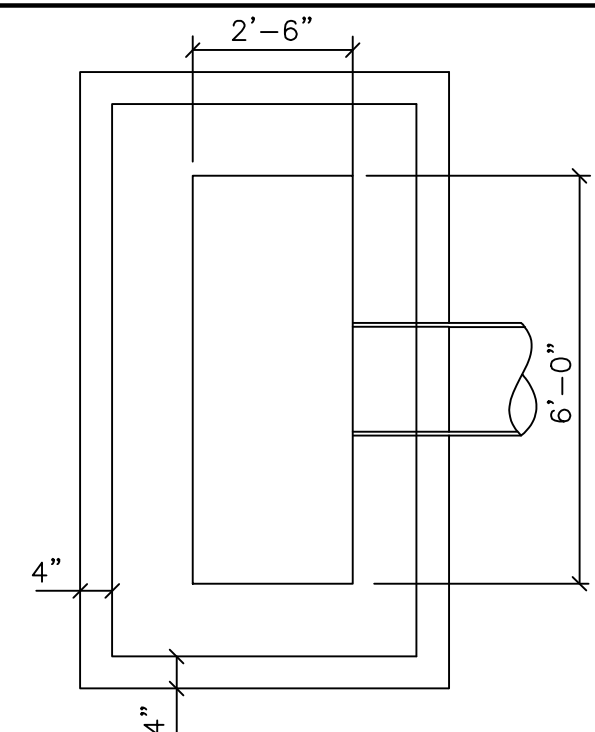
CATCH BASINS 2X3-FT
 AND 2.5X3-FT

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 6/5/2012 /S/ Jerry H. Zogg
 DATE ROADWAY STANDARDS DEVELOPMENT
 FHWA ENGINEER

NOTES

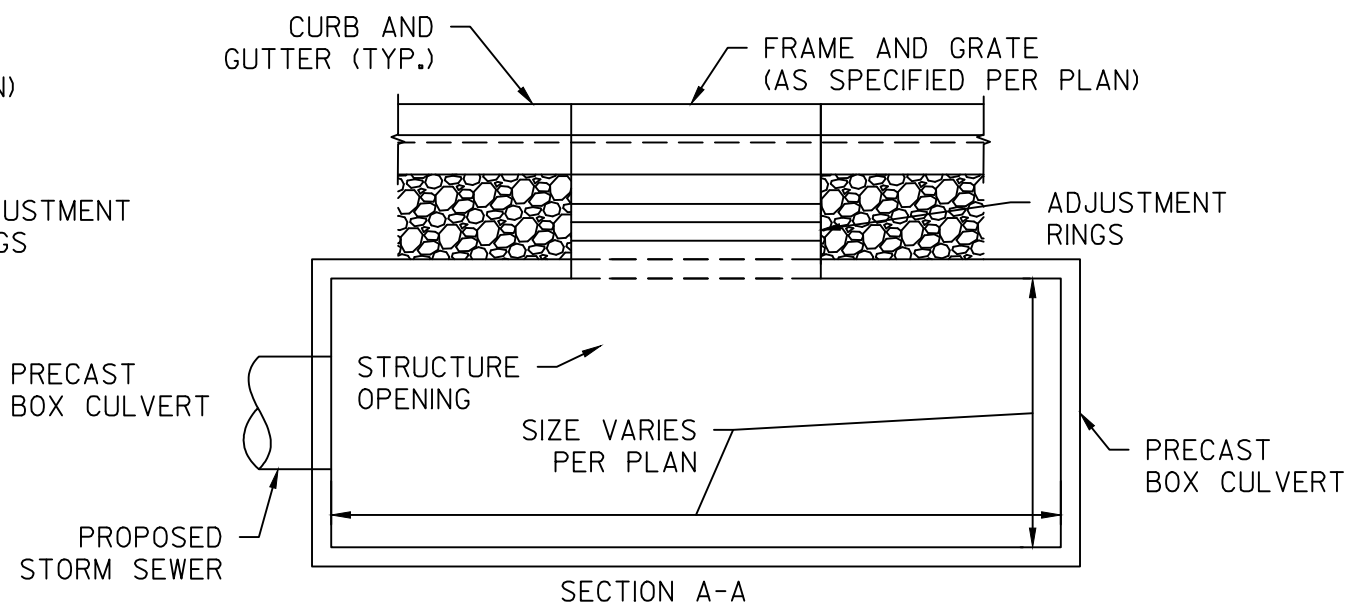
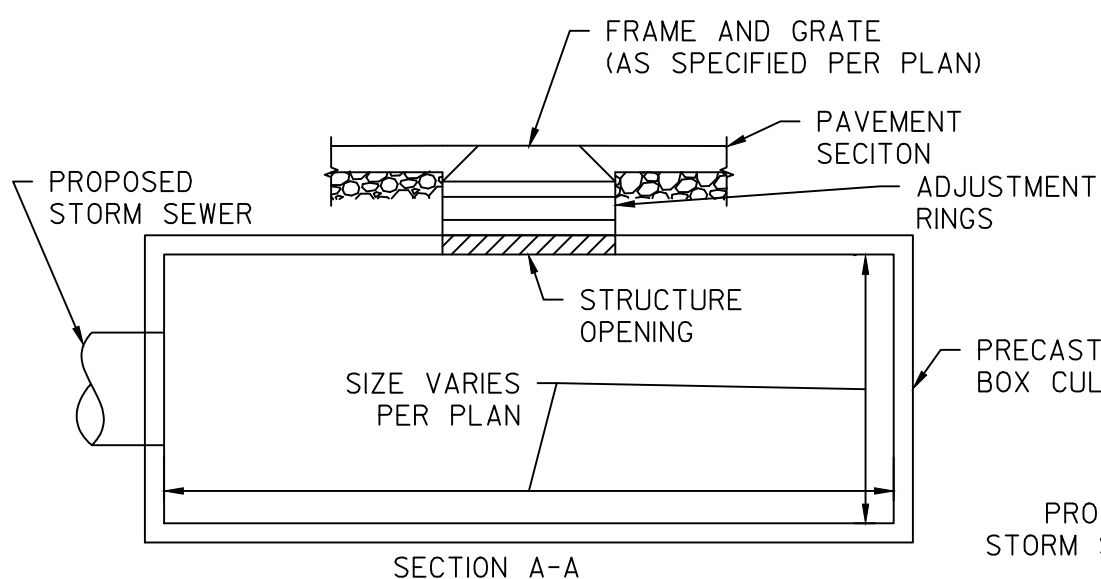
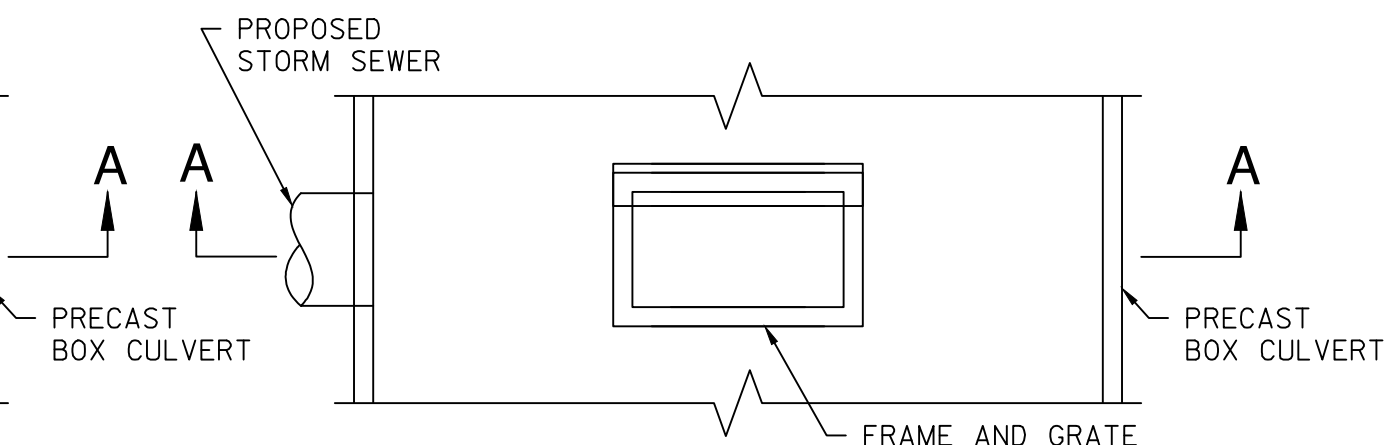
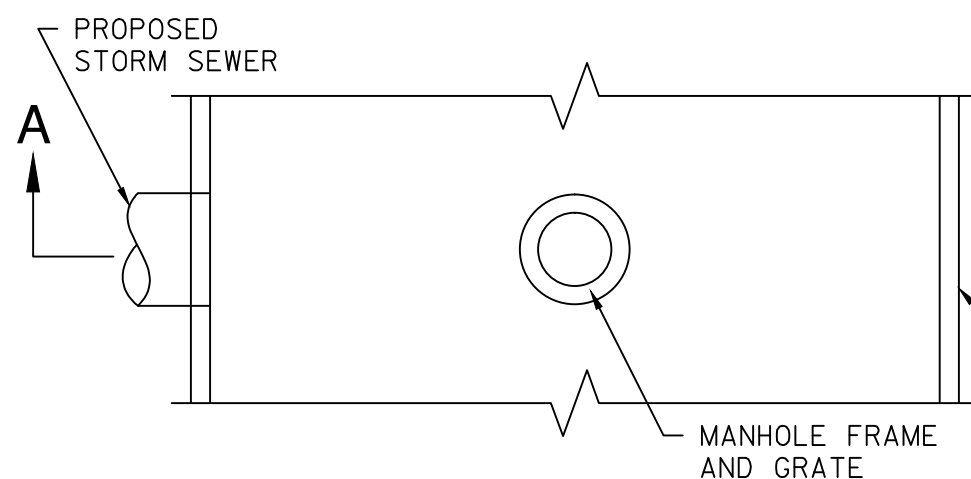
- ALL CATCH BASINS SHALL BE PRECAST CONCRETE STRUCTURES. NO BLOCK CATCH BASINS.



NOTES: CONSTRUCTION SHALL CONFORM TO SDD "CATCH BASINS, 2X3-FT AND 2.5X3-FT"

CATCH BASINS 2.5X6-FT

N.T.S.

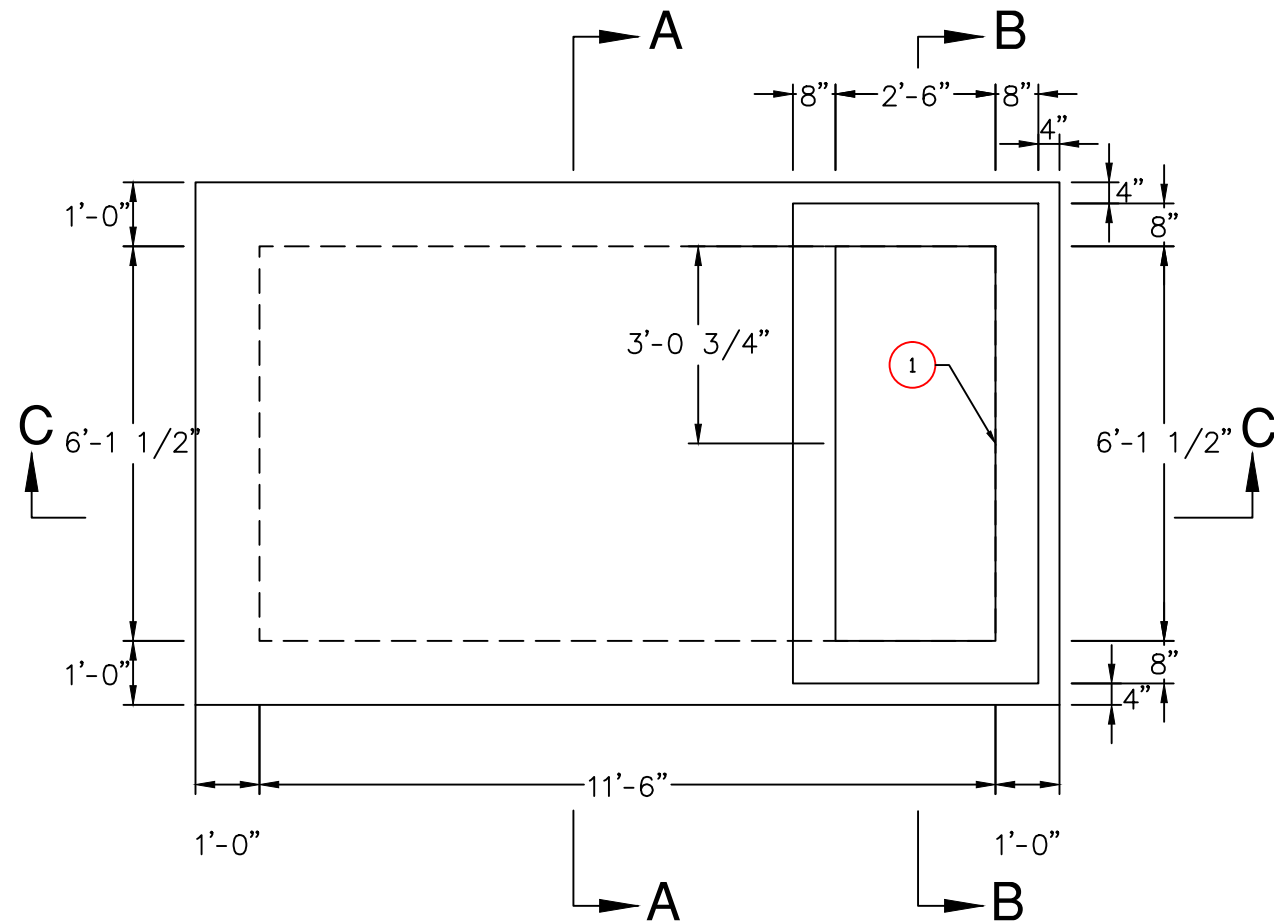


INLINE MANHOLE & INLET DETAIL

N.T.S.

NOTES:

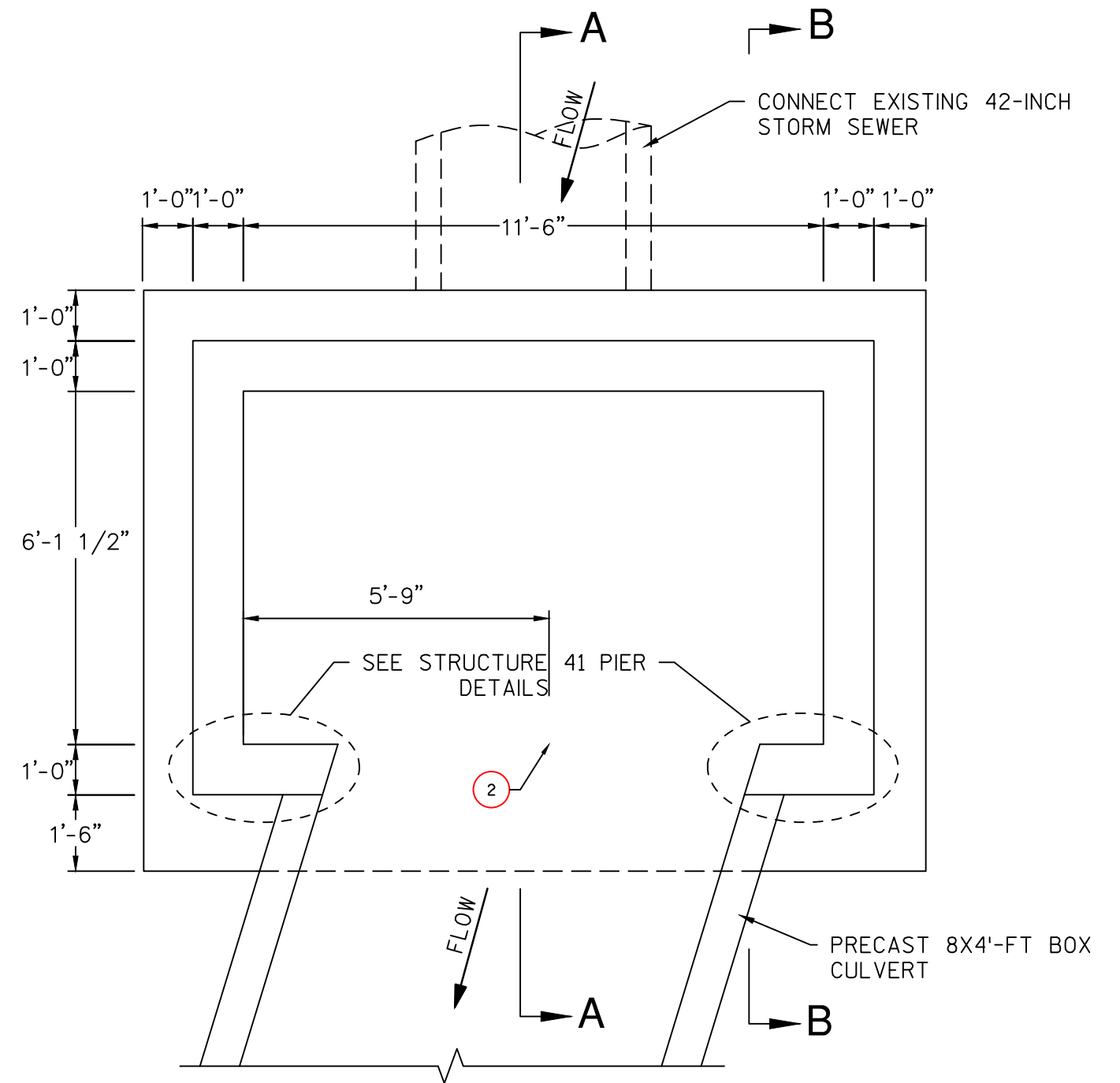
1. MANHOLE AND INLET FRAME AND GRATE SHALL BE INSTALLED ABOVE CULVERT PIPE.
2. CONTRACTOR SHALL COORDINATE ALL PIPE CONNECTION OPENINGS AND CASTING OPENINGS WITH PRECAST BOX CULVERT MANUFACTURER. ALL CULVERT OPENINGS MUST BE APPROVED BY STATE OF WISCONSIN STRUCTURAL PROFESSIONAL ENGINEER.
3. MANHOLE FRAME AND GRATE SHALL BE INSTALLED IN THE MIDDLE OF THE CULVERT PIPE.
4. ALL INLET FRAME AND GRATES SHALL BE INSTALLED IN THE MIDDLE OF THE CULVERT PIPE.



STRUCTURE 41 - TOP SLAB DETAIL
N.T.S.

NOTES

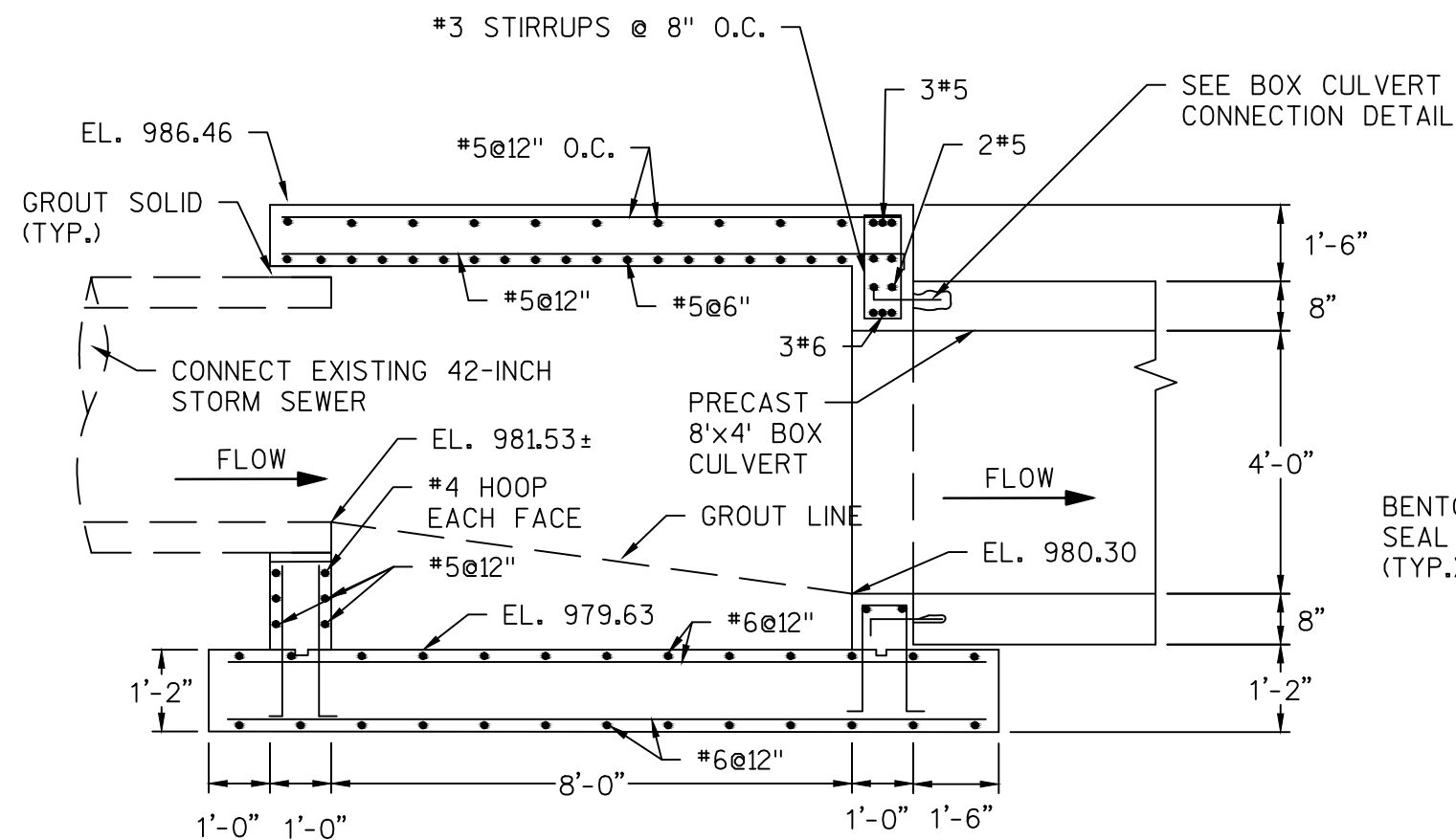
- STRUCTURE 41 STATION AND OFFSET AT BACK OF CURB IS AS FOLLOWS
STA. XXX+XX OFF. XX.XX



STRUCTURE 41 - BASE SLAB PLAN
N.T.S.

NOTES

- STRUCTURE 41 STATION AND OFFSET AT INSIDE FACE OF STRUCTURE AT CENTER OF 8'X4' BOX CULVERT CONNECTION IS AS FOLLOWS
STA. XXX+XX OFF.XX.XX'

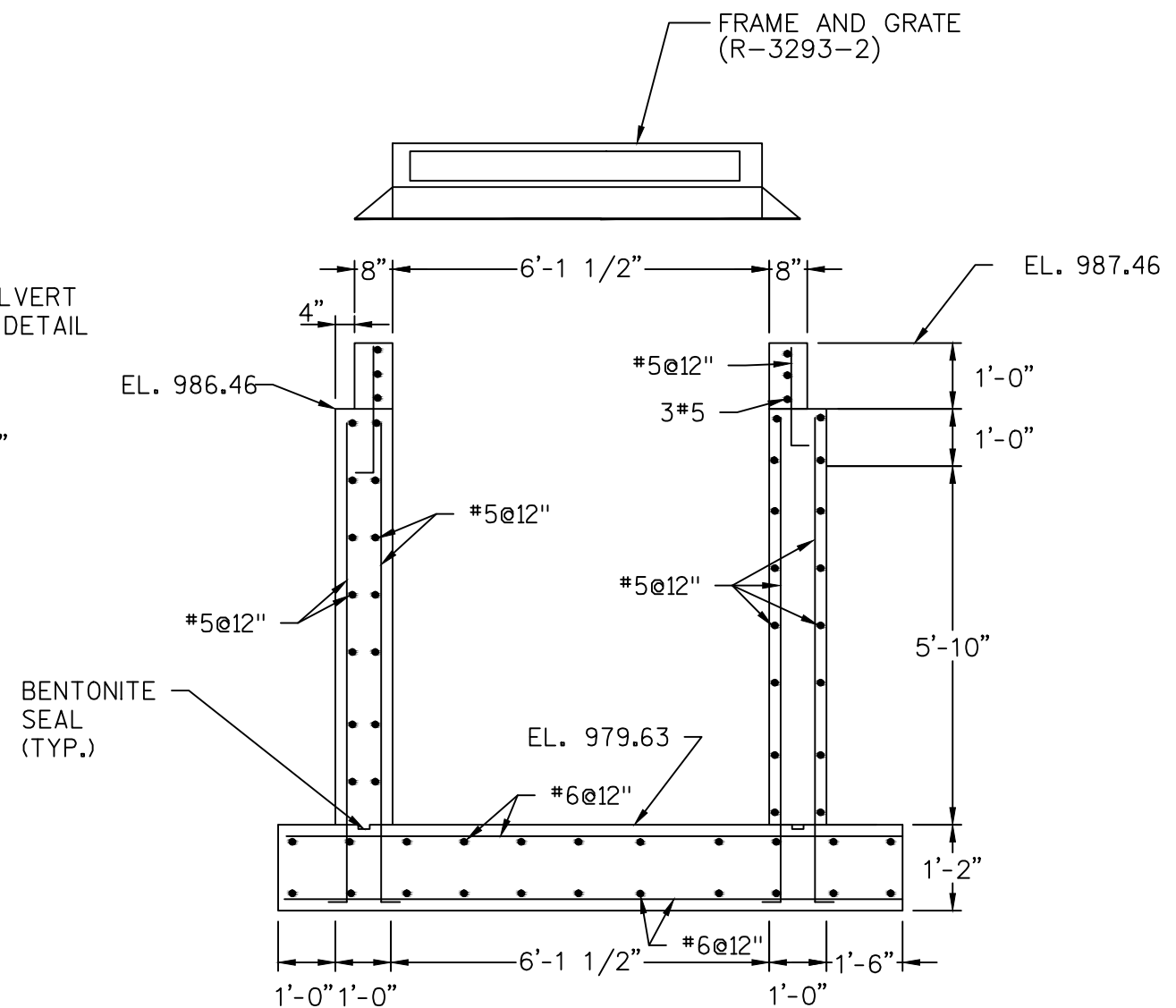


STRUCTURE 41 - SECTION A-A

N.T.S.

NOTES

- CONTRACTOR SHALL GROUT FLOW LINES AND FILLETS WITHIN STRUCTURE.

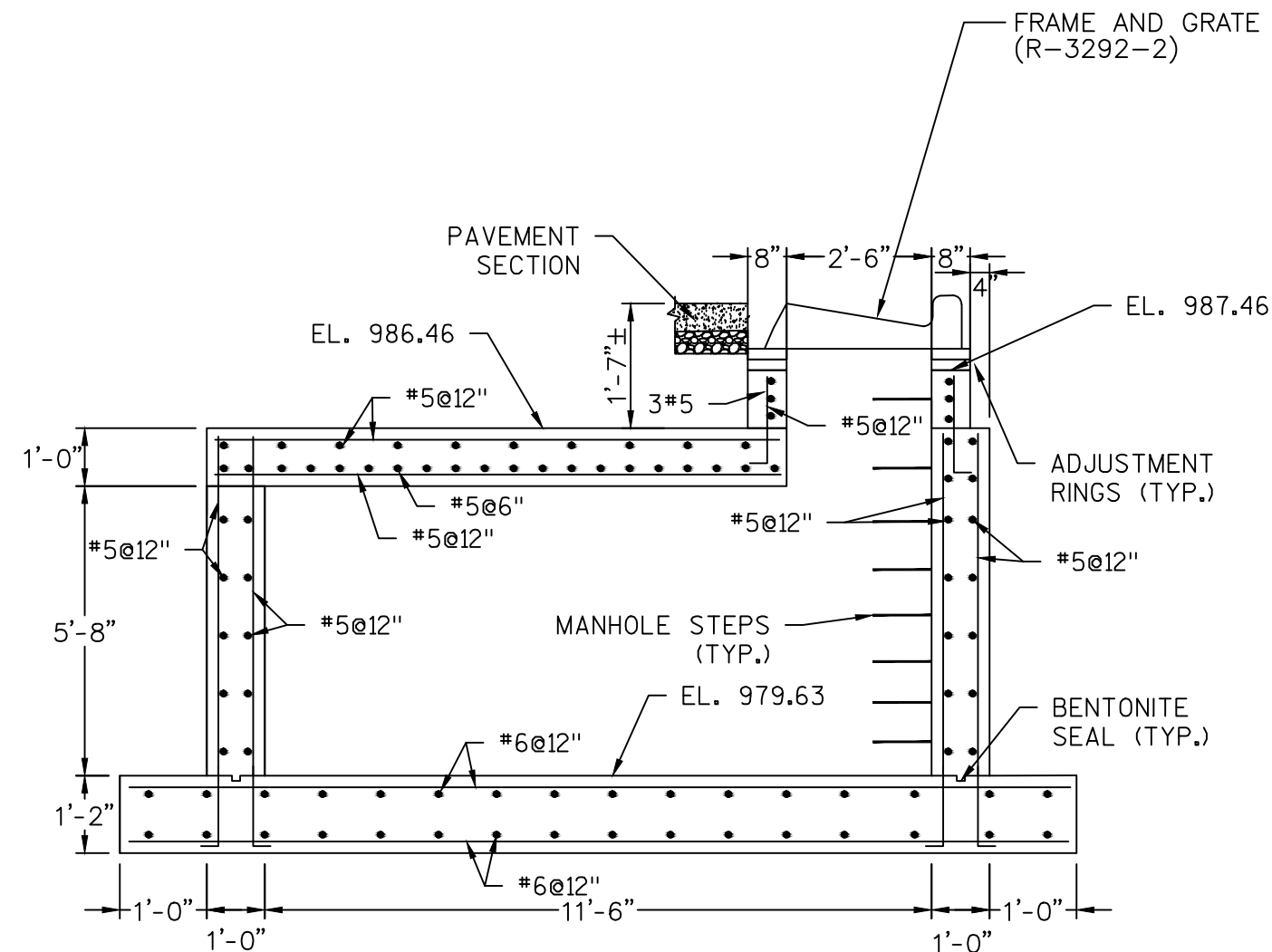


STRUCTURE 41 - SECTION B-B

N.T.S.

NOTES

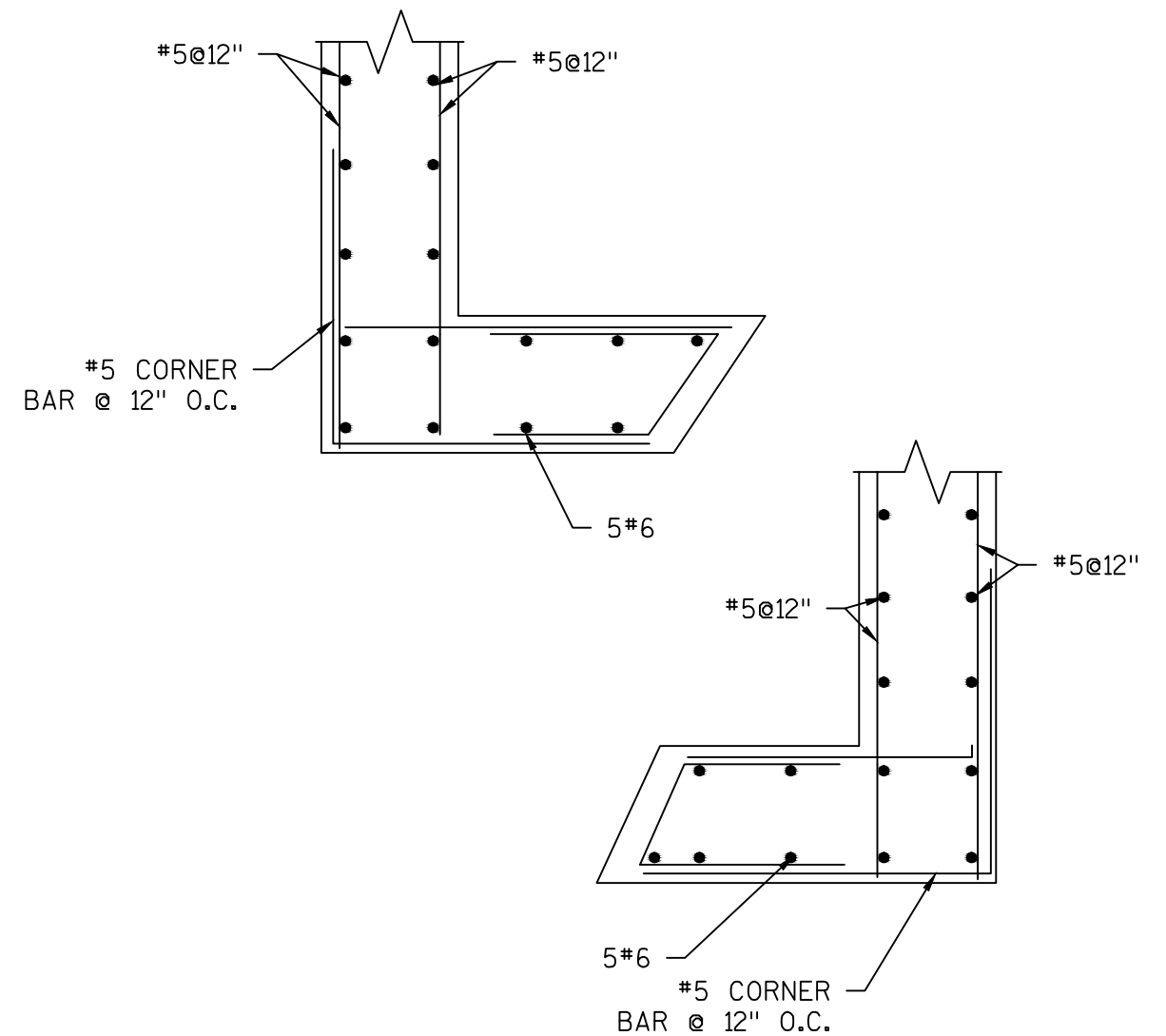
- RIM ELEVATION FOR STRUCTURE 41 IS AT FLOW LINE/FACE OF CURB. SEE STORM SEWER PLAN AND PROFILE SHEET FOR CASTING ELEVATION.



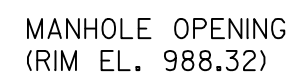
STRUCTURE 41 - SECTION C-C
N.T.S

NOTES

1. MANHOLE STEPS SHALL BE INSTALLED AS SPECIFIED.



STRUCTURE 41 - PIER DETAIL
N.T.S

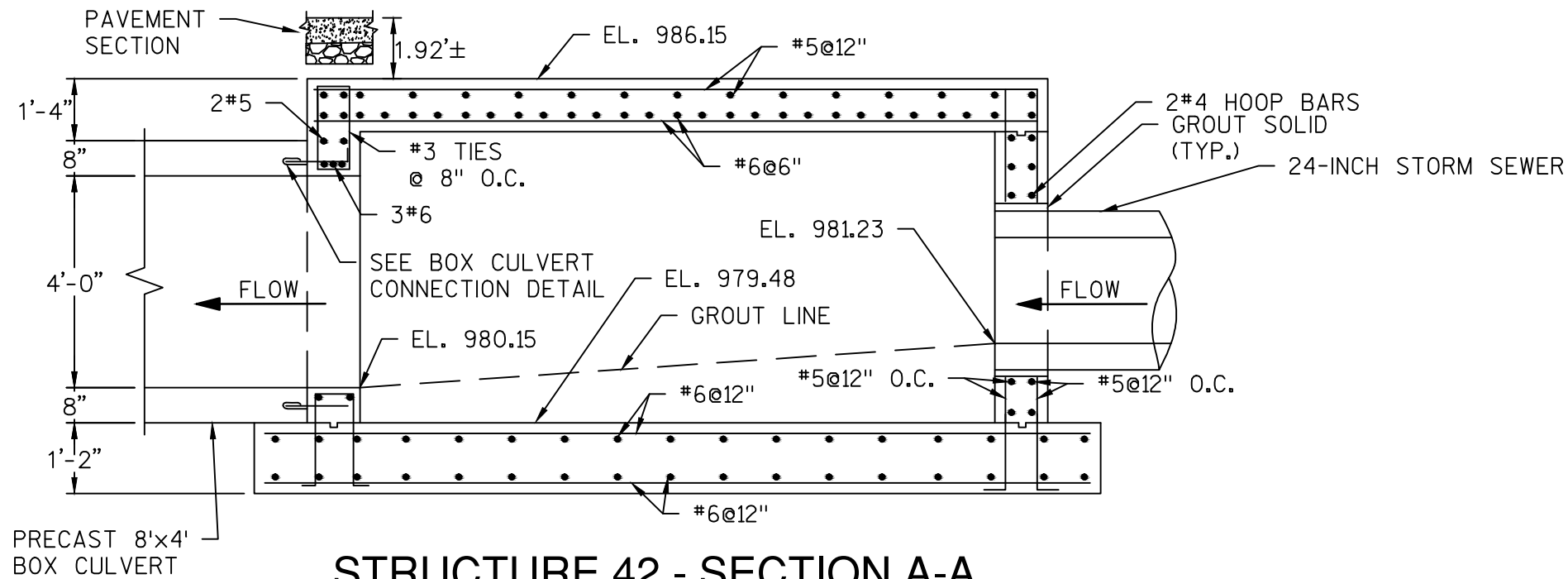


N.T.S.

NOTES:

1. ADD TO BOTTOM BARS
2. MANHOLE STEPS SHALL BE INSTALLED AS SPECIFIED.



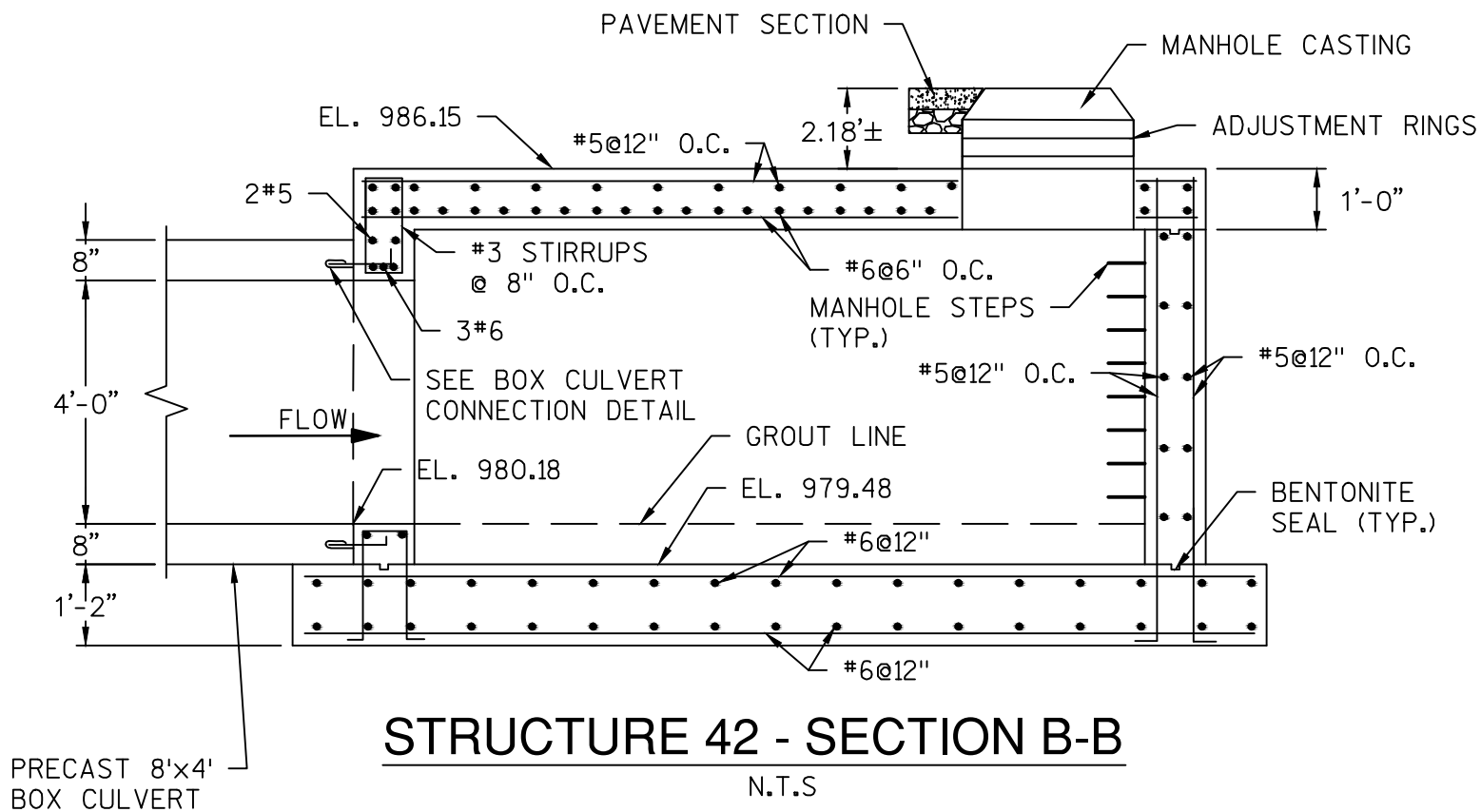


STRUCTURE 42 - SECTION A-A

N.T.S

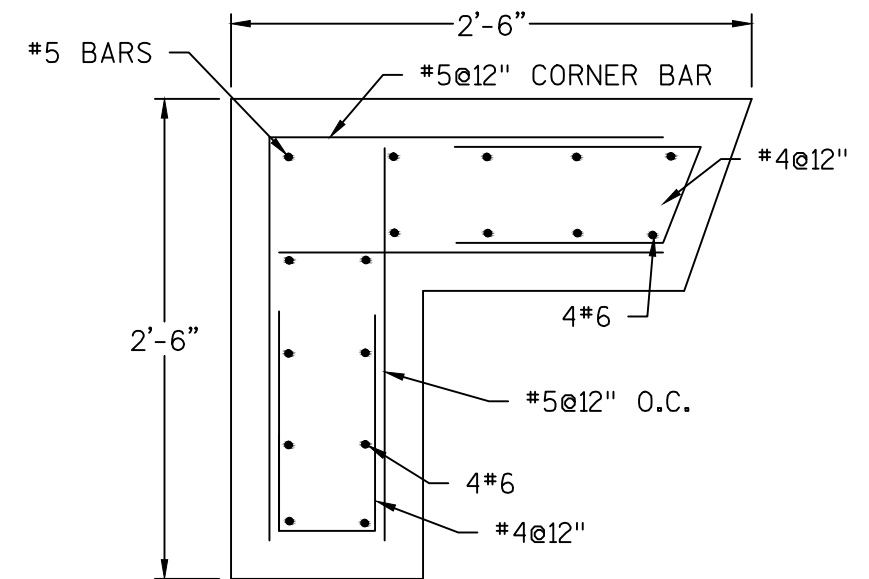
NOTES

1. CONTRACTOR SHALL GROUT FLOW LINE AND FILLETS WITHIN STRUCTURE



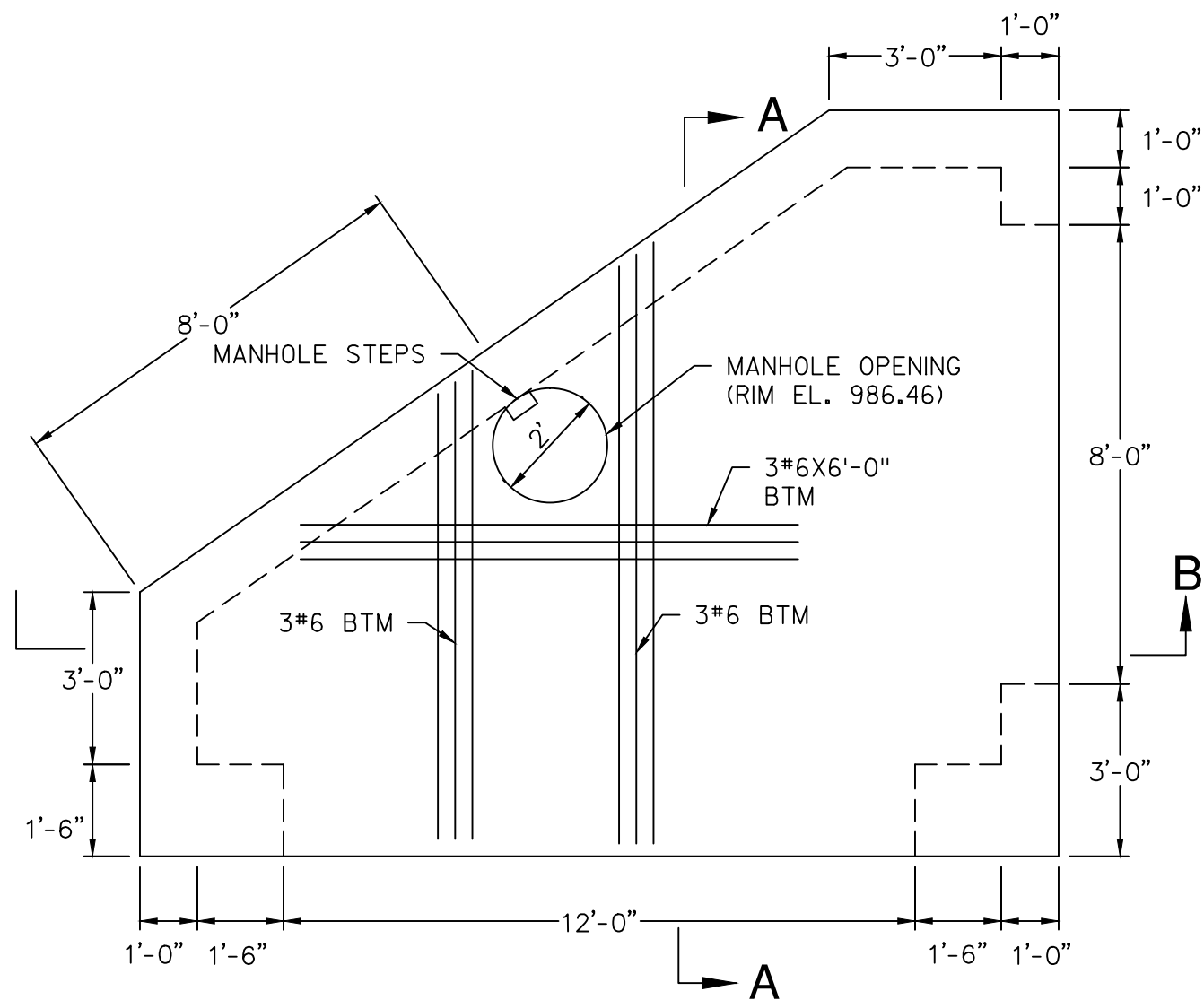
STRUCTURE 42 - SECTION B-B

N.T.S



STRUCTURE 42 - CORNER DETAIL

N.T.S

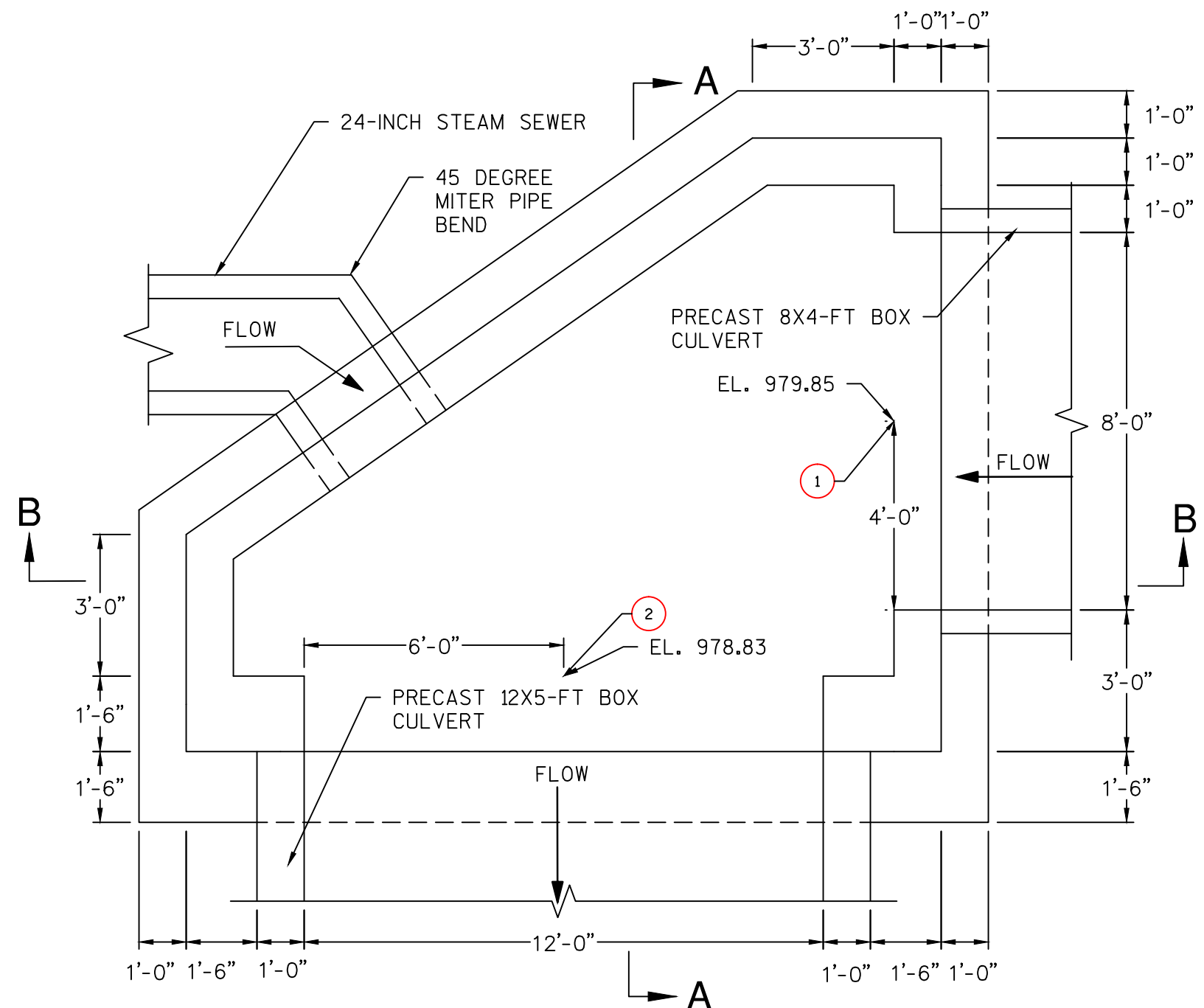


STRUCTURE 4 - TOP SLAB PLAN

N.T.S

NOTES

1. MANHOLE STEPS SHALL BE INSTALLED AS SPECIFICED.

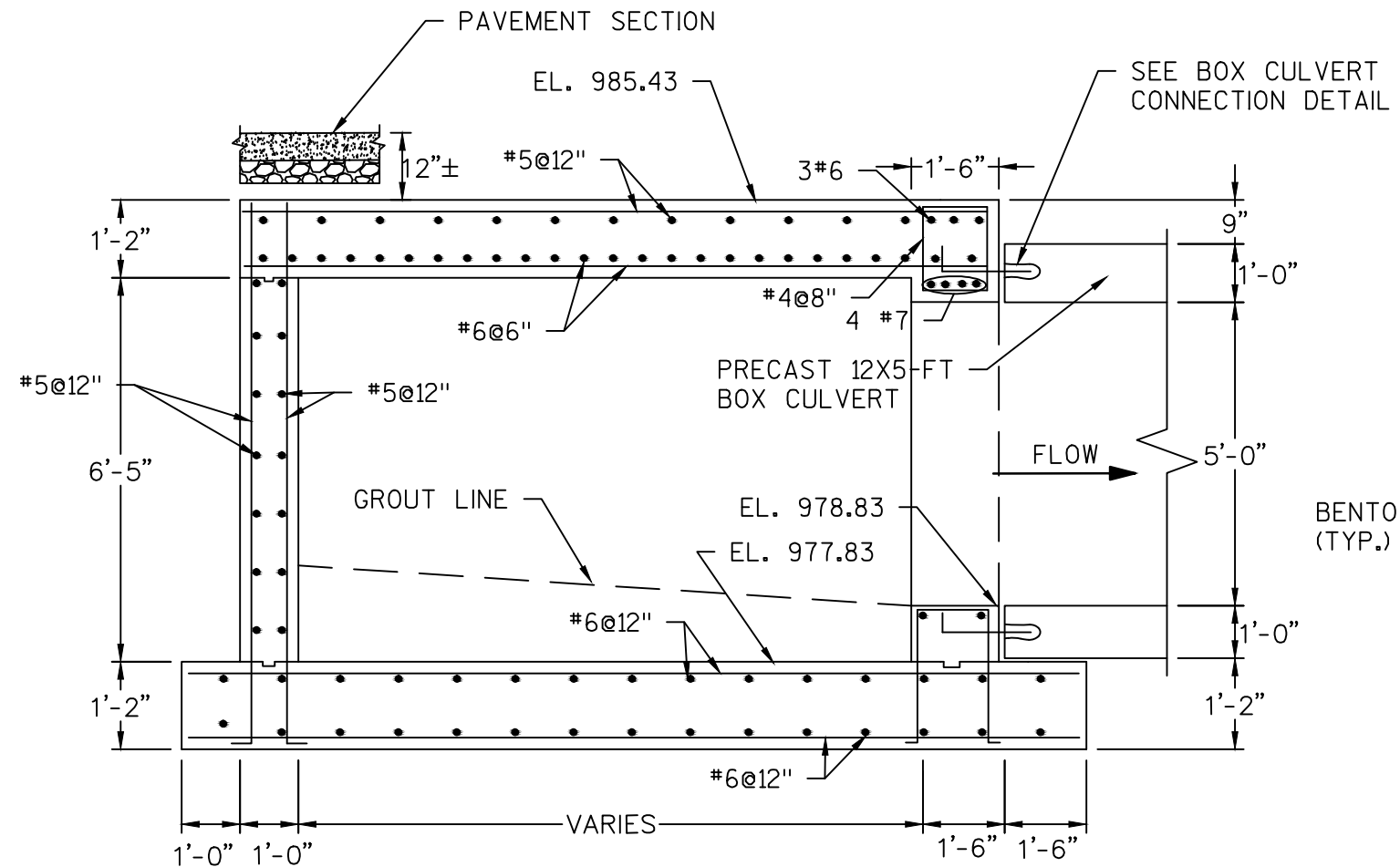


STRUCTURE 4 - BASE SLAB PLAN

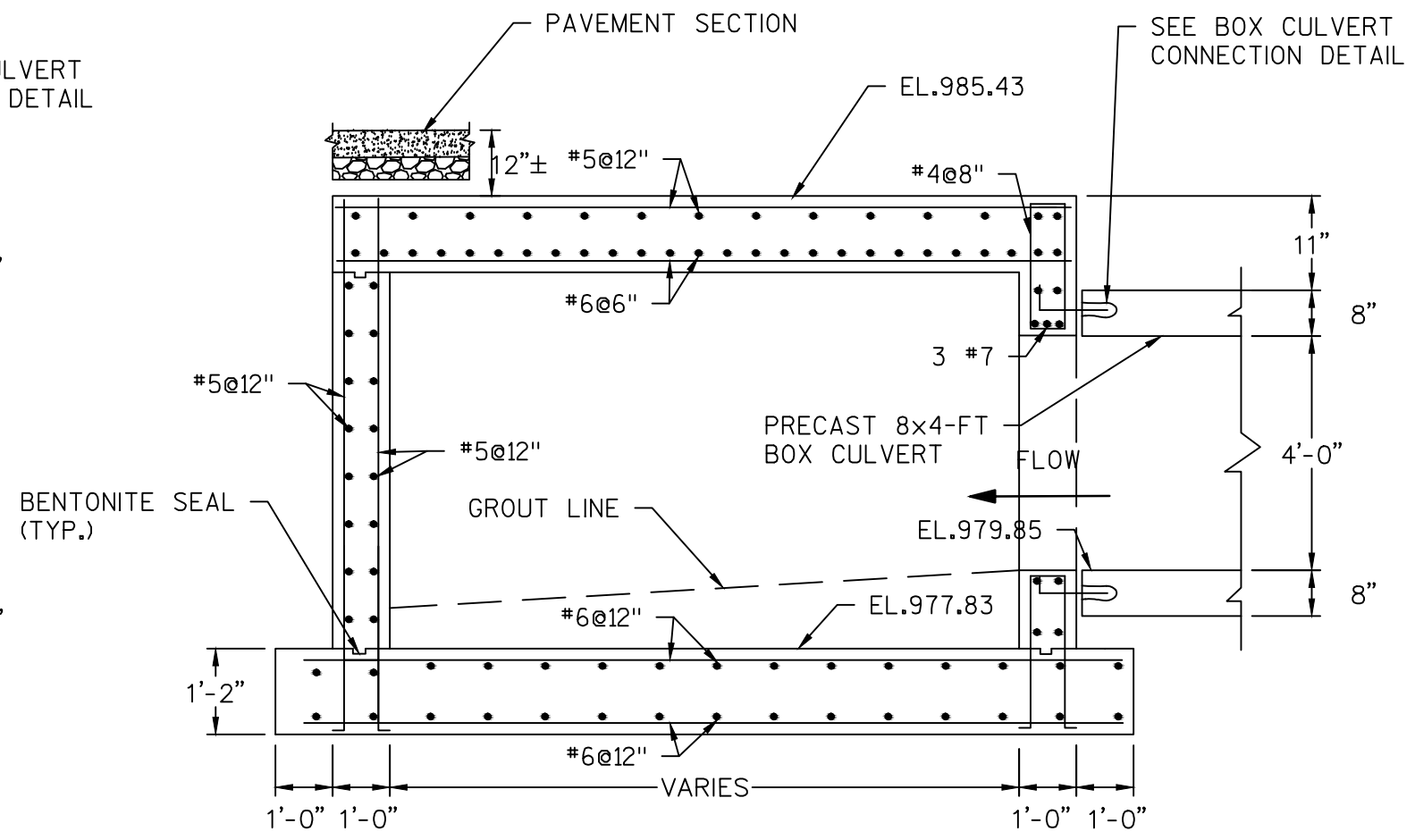
N.T.S.

NOTES

1. STRUCTURE 4 STATION AND OFFSET IS AT INSIDE FACE OF STRUCTURE AT CENTER OF 12'X4' AND 12'X5' BOX CULVERT CONNECTIONS IS AS FOLLOWS
- 1. STA XXX.XX OFF. XX.XX
 - 2. STA XXX.XX OFF. XX.XX
2. CONTRACTOR SHALL GROUT FLOW LINE AND FILLETS WITHIN STRUCTURE.

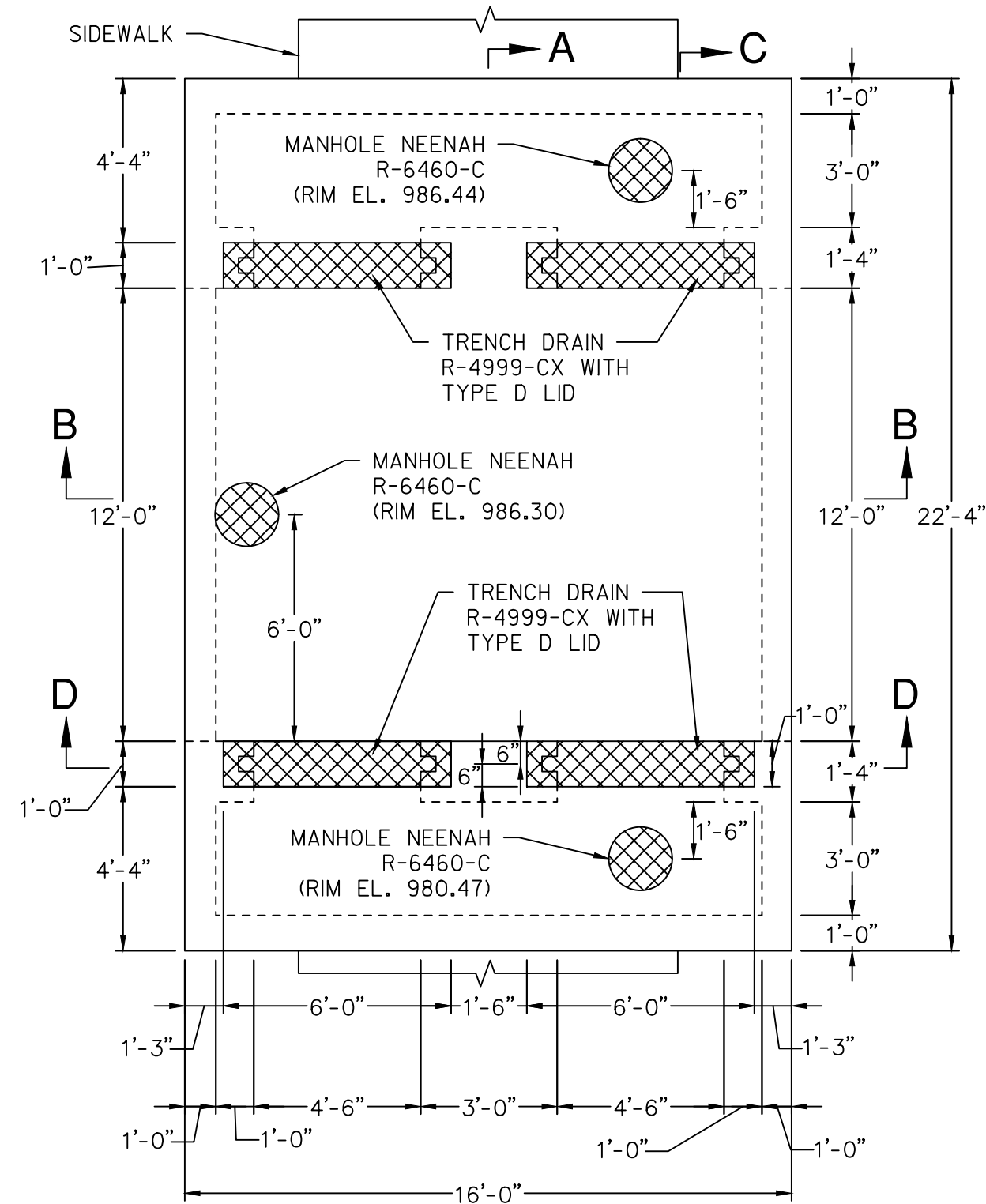


STRUCTURE 4 - SECTION A-A
N.T.S



STRUCTURE 4 - SECTION B-B
N.T.S

FILE NAME : L:\Jobs\2015\20150236\CAD\Site\dwg\00#C-00-Details-0236.dwg

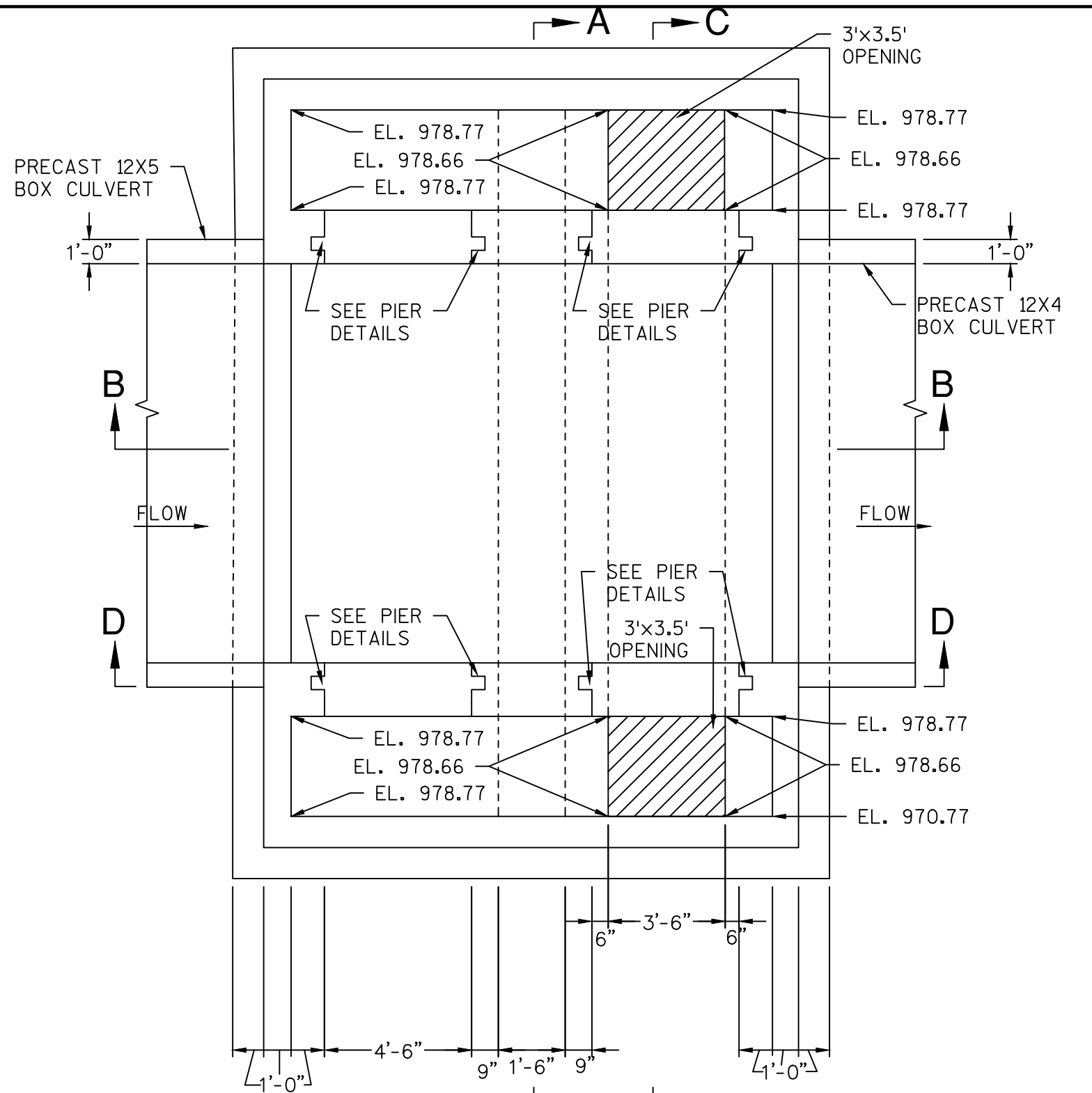


DIVERSION STRUCTURE 8-TOP SLAB PLAN

NOTES:

1. TRENCH CASTING AND MANHOLE FRAME SHALL BE POURED INTO TOP SLAB SECTION. TRENCH CASTINGS SHALL MATCH SIDEWALK ELEVATIONS
2. REFER TO TYPICAL MANHOLE OPENING REBAR DETAIL FOR ALL REINFORCEMENT AT MANHOLE OPENINGS

N.T.S.

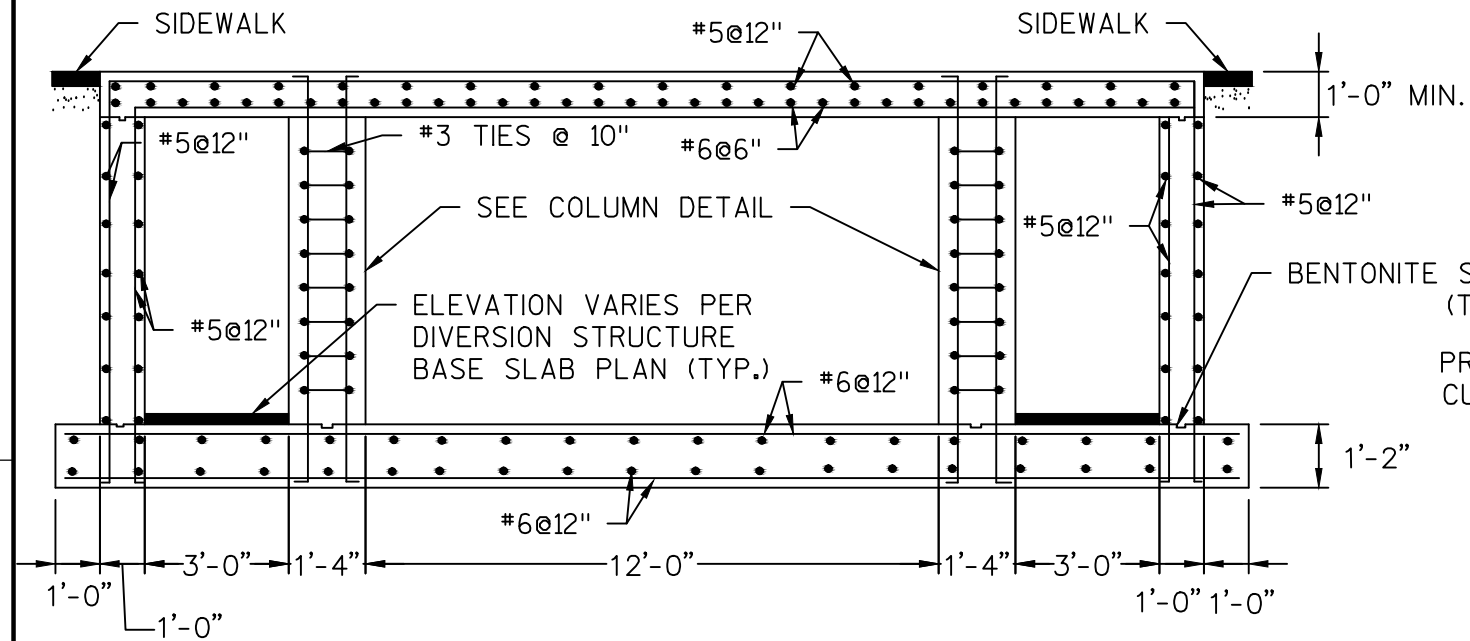


DIVERSION STRUCTURE 8-BASE SLAB PLAN

NOTES:

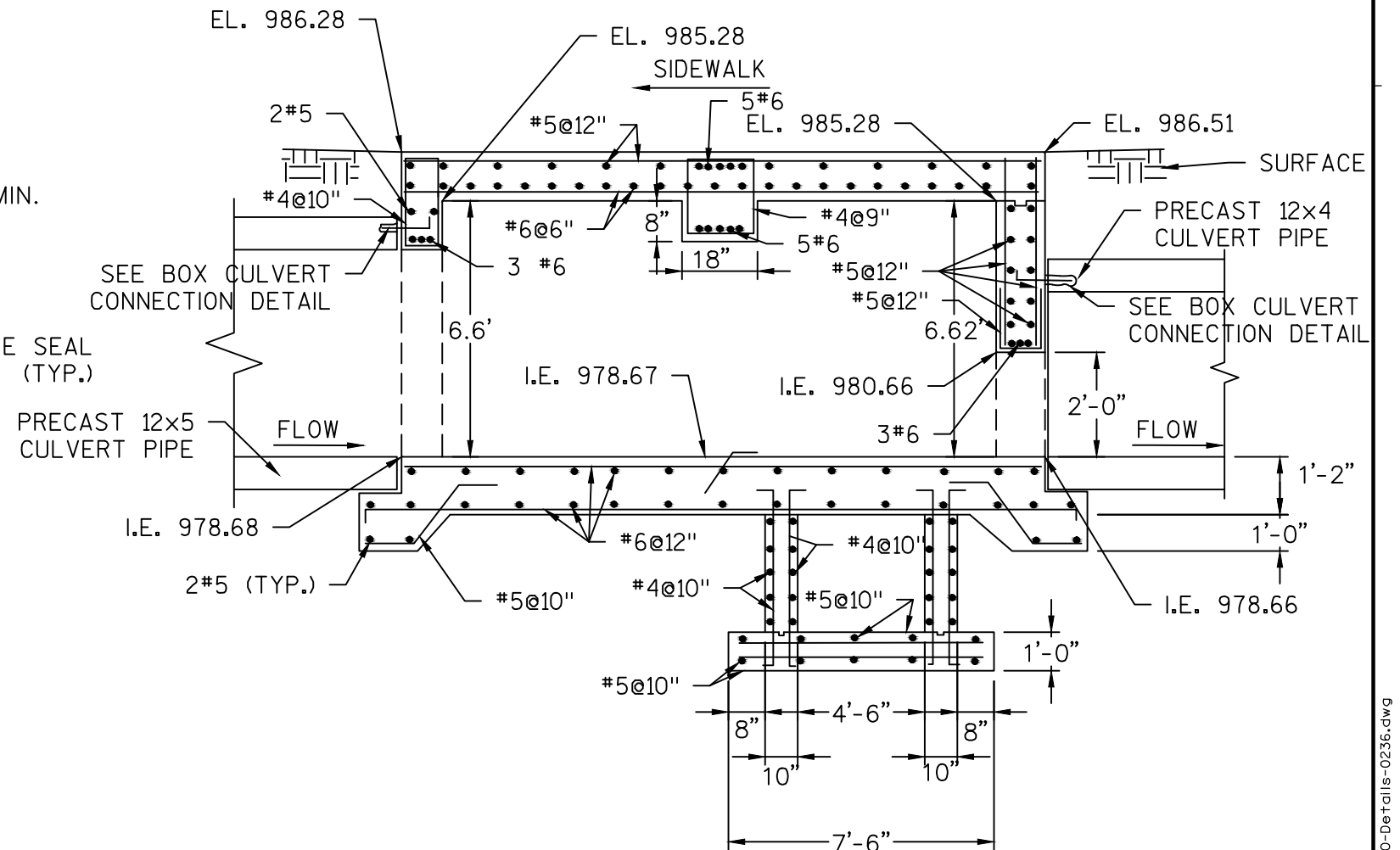
1. CONTRACTOR SHALL GROUT FLOW LINE TO ELEVATIONS AS INDICATED ON DRAWING.

N.T.S.



DIVERSION STRUCTURE DETAIL SECTION A-A

N.T.S.

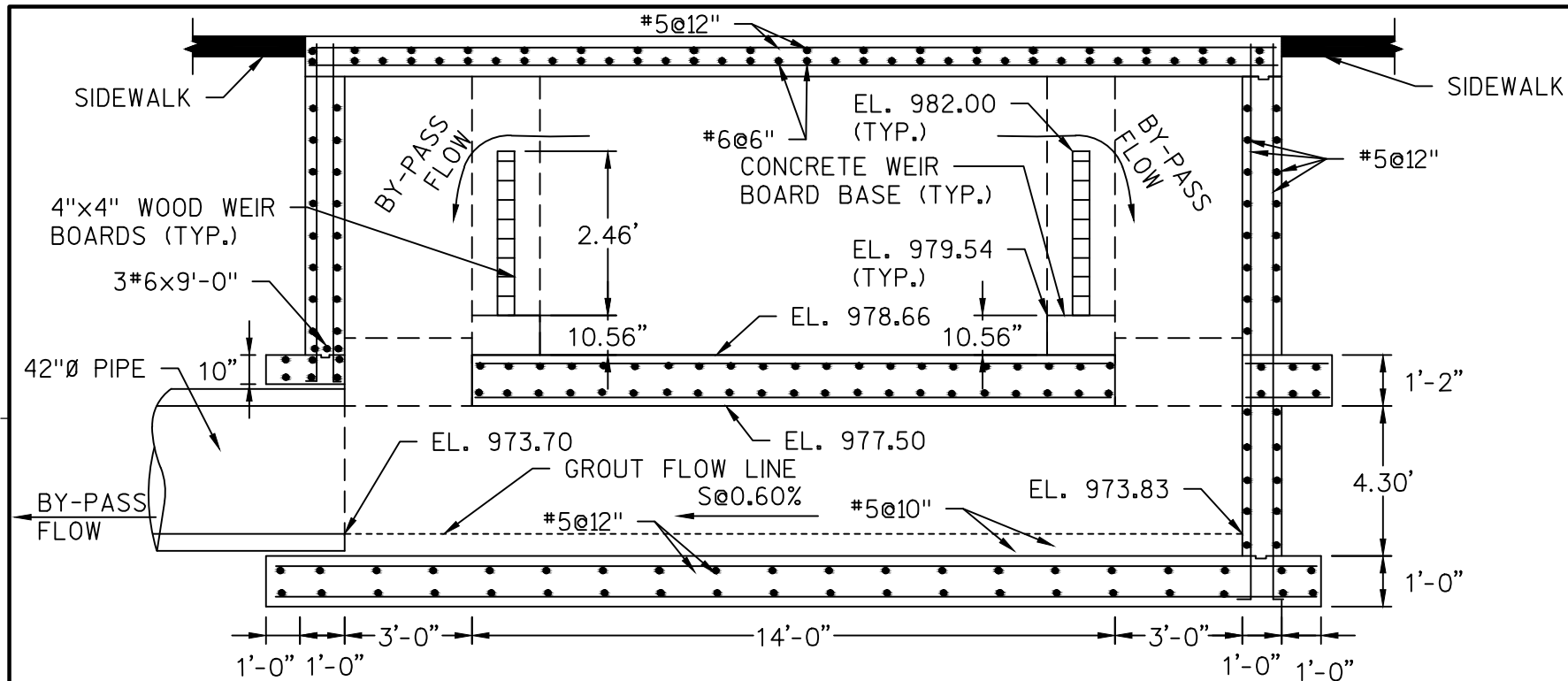


DIVERSION STRUCTURE DETAIL SECTION B-B

N.T.S.

NOTES:

1. TOP SLAB SLOPE SHALL MATCH PROPOSED SIDEWALK SLOPE.
2. TOP SLAB THICKNESS WILL VARY PER THE ELEVATIONS PROVIDED.

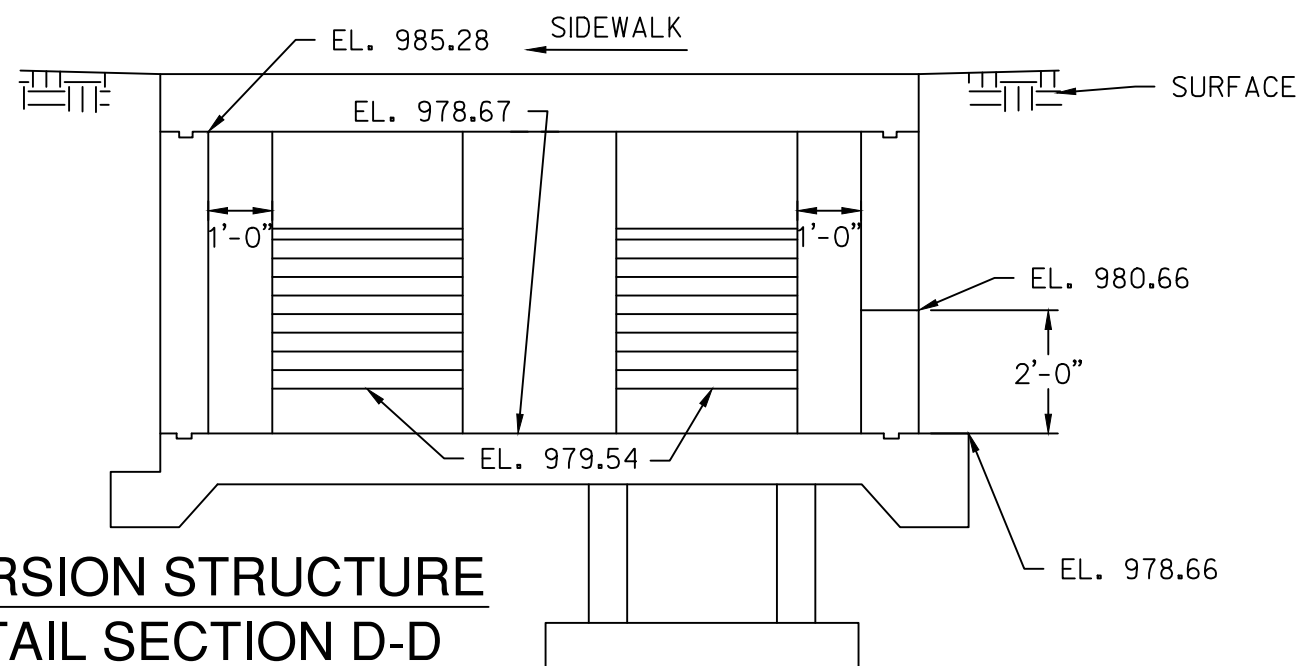


DIVERSION STRUCTURE DETAIL SECTION C-C

N.T.S.

NOTES:

1. CONTRACTOR SHALL INSTALL WEIR BOARDS TO BE LEVEL AT ELEVATION INDICATED ON DRAWING.
2. WEIR BOARDS SHALL BE LEVEL WITH CONCRETE LEVEL BASE.
3. INSTALL (8) FULL SIZE 4"X4" BOARDS AND (1) 4"X4" WEIR BOARD TO 152 INCHES TALL TO REACH ELEVATION 982.00

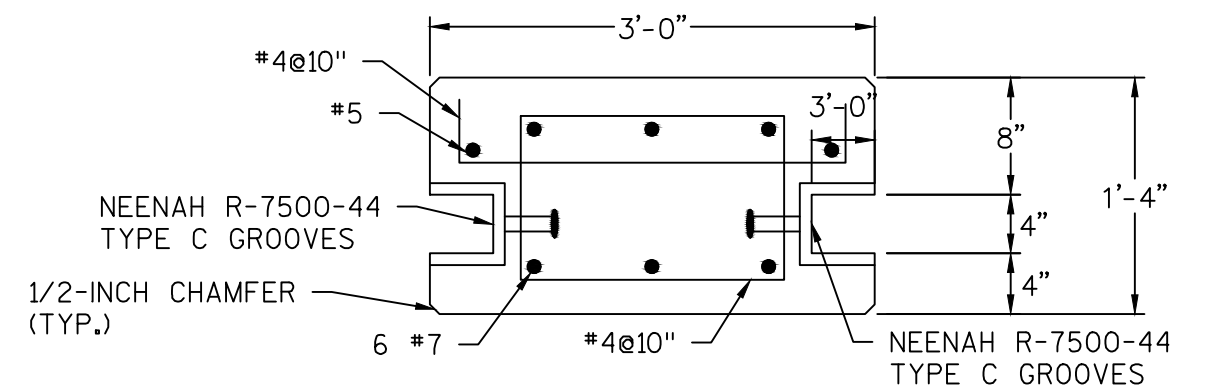


DIVERSION STRUCTURE DETAIL SECTION D-D

N.T.S.

NOTES:

1. TOP SLAB SLOPE SHALL MATCH PROPOSED SIDEWALK SLOPE.
2. TOP SLAB THICKNESS WILL VARY PER THE ELEVATIONS PROVIDED.

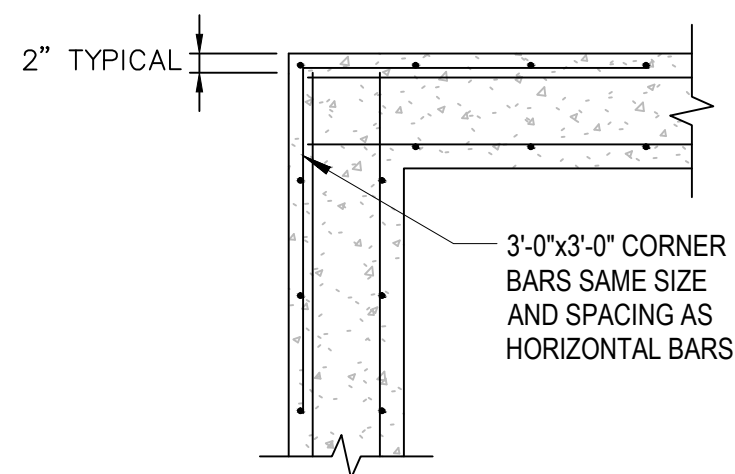


DIVERSION STRUCTURE PIER DETAILS

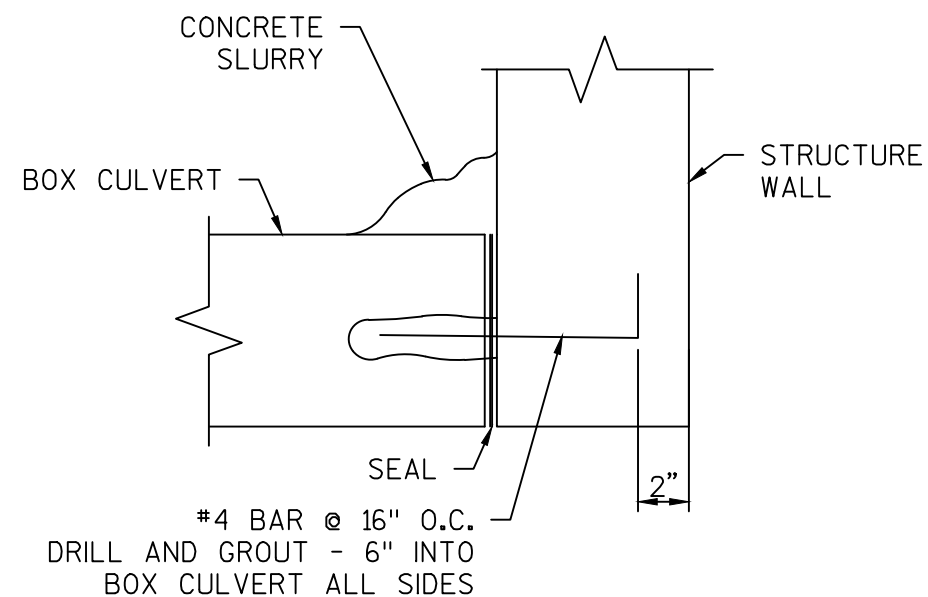
N.T.S.

NOTES:

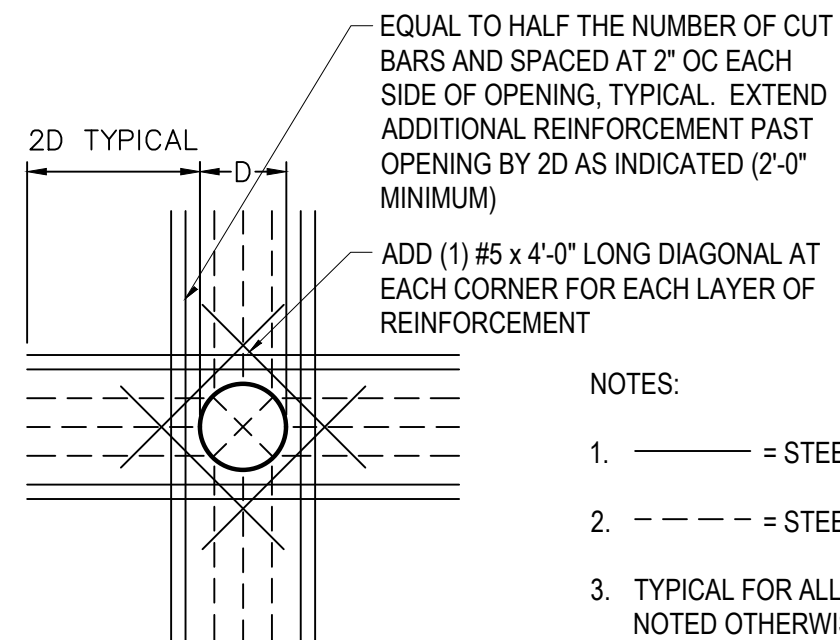
1. CONTRACTOR SHALL INSTALL CAST IRON STOP PLANK GROOVES R-7500-44, TYPE C
2. CONTRACTOR SHALL PROVIDE 1/2-INCH CHAMFER ON DIVERSION STRUCTURE COLUMN POSTS



TWO LAYERS OF REINFORCEMENT
TYPICAL CORNER DETAIL
 N.T.S.



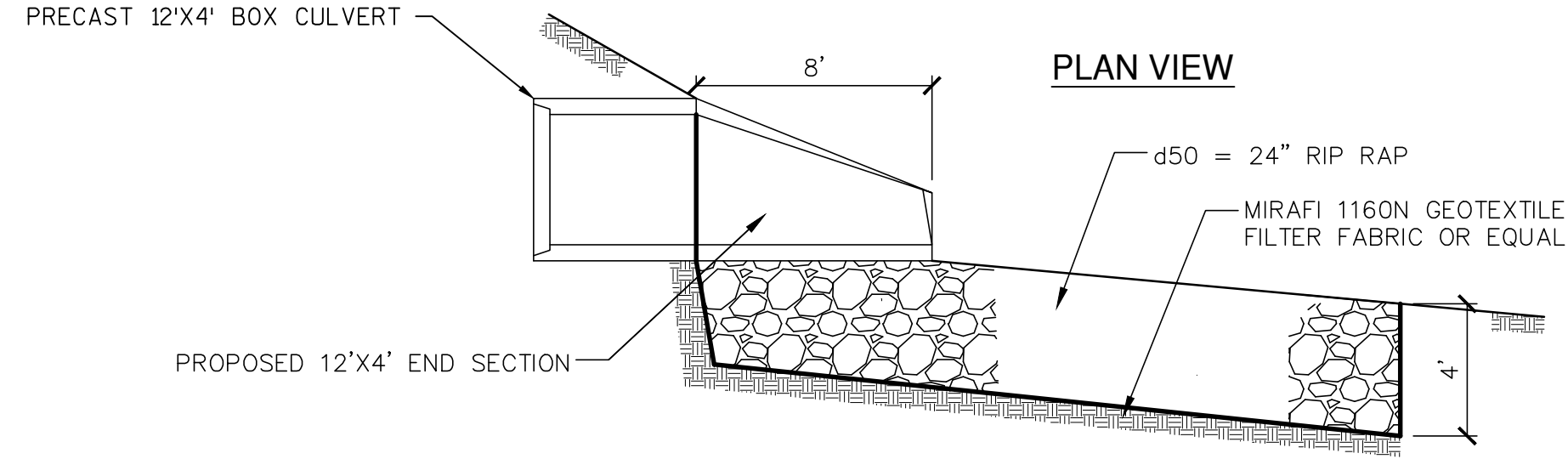
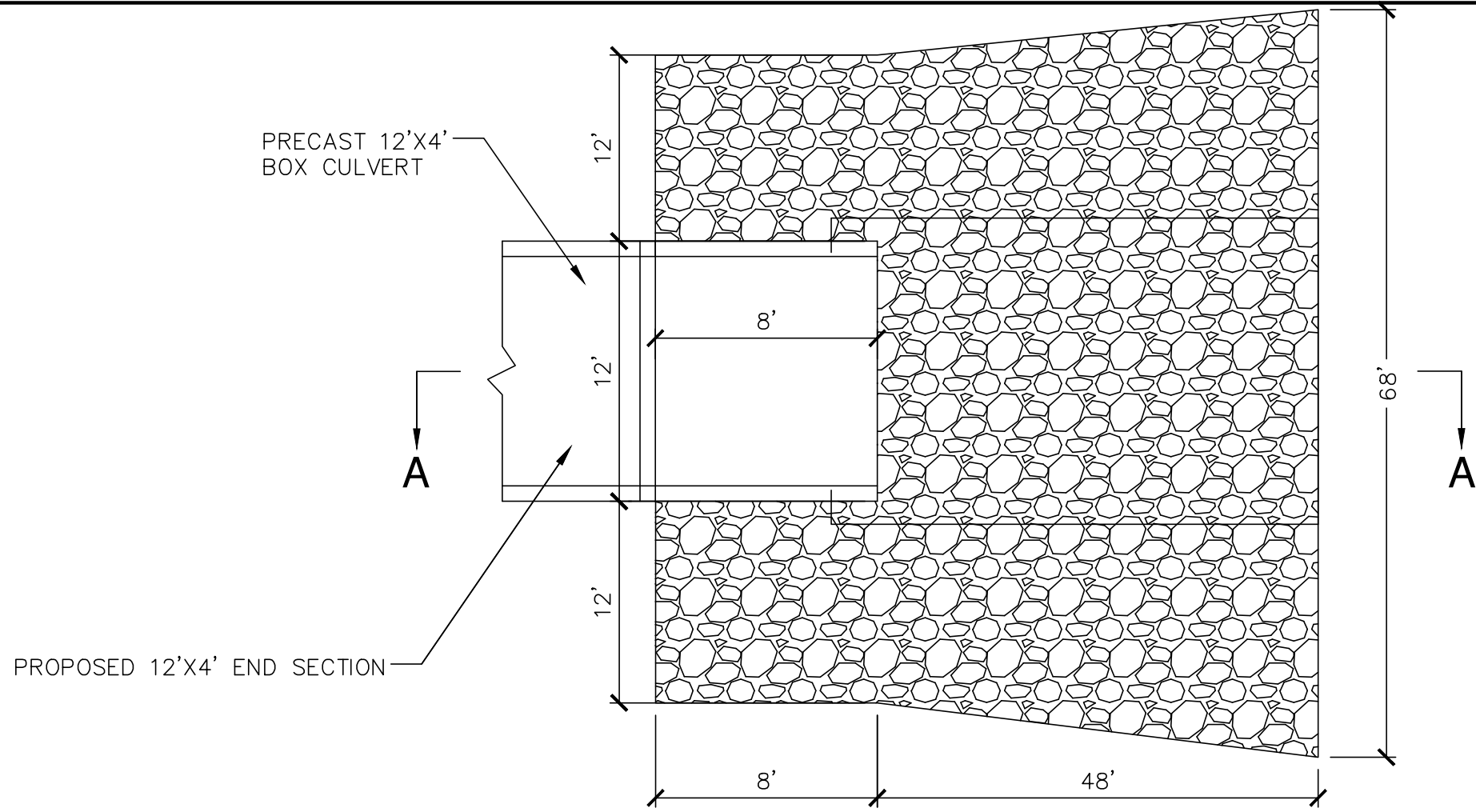
BOX CULVERT CONNECTION DETAIL
 N.T.S.



**TYPICAL REBAR MANHOLE
 OPENING DETAIL**
 N.T.S.

NOTES:

1. ————— = STEEL REINFORCEMENT CONTINUOUS.
2. - - - - = STEEL REINFORCEMENT CUT.
3. TYPICAL FOR ALL OPENINGS IN CONCRETE WALLS AND SLABS UNLESS NOTED OTHERWISE ON PLAN.
4. DO NOT WELD REINFORCEMENT TO PIPE SLEEVES AND INSERTS.
5. FOR OPENINGS 1'-0" ROUND/SQUARE OR LESS THE WALL STEEL CAN BE REPLACED WITHOUT ADDITIONAL REINFORCEMENT.

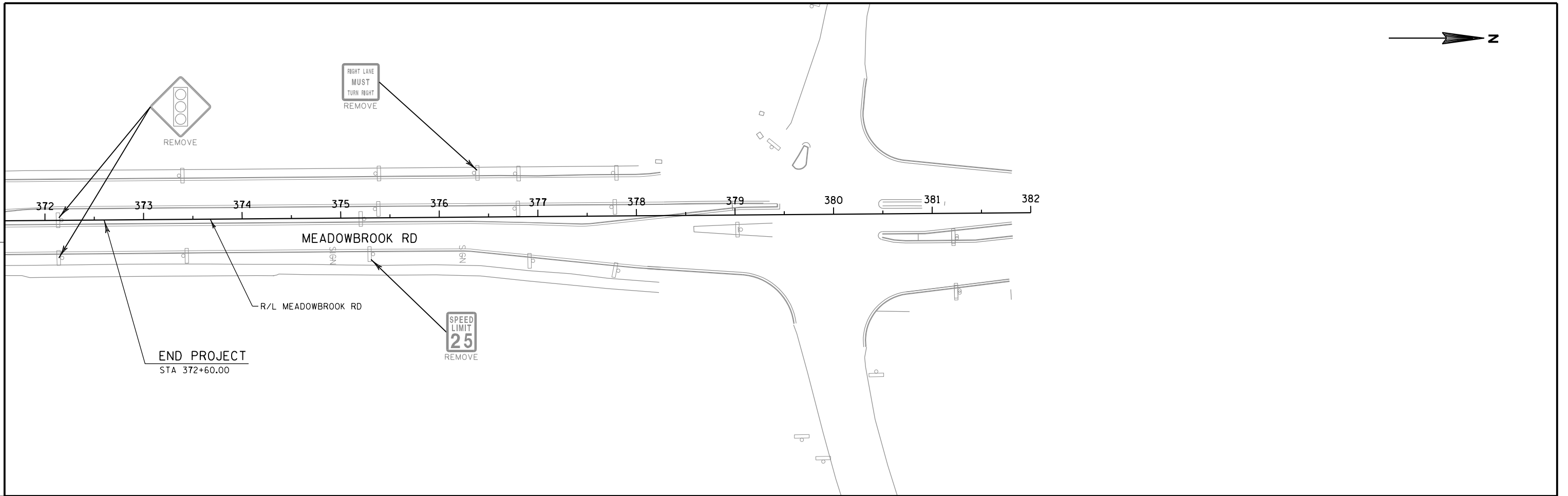


⑦

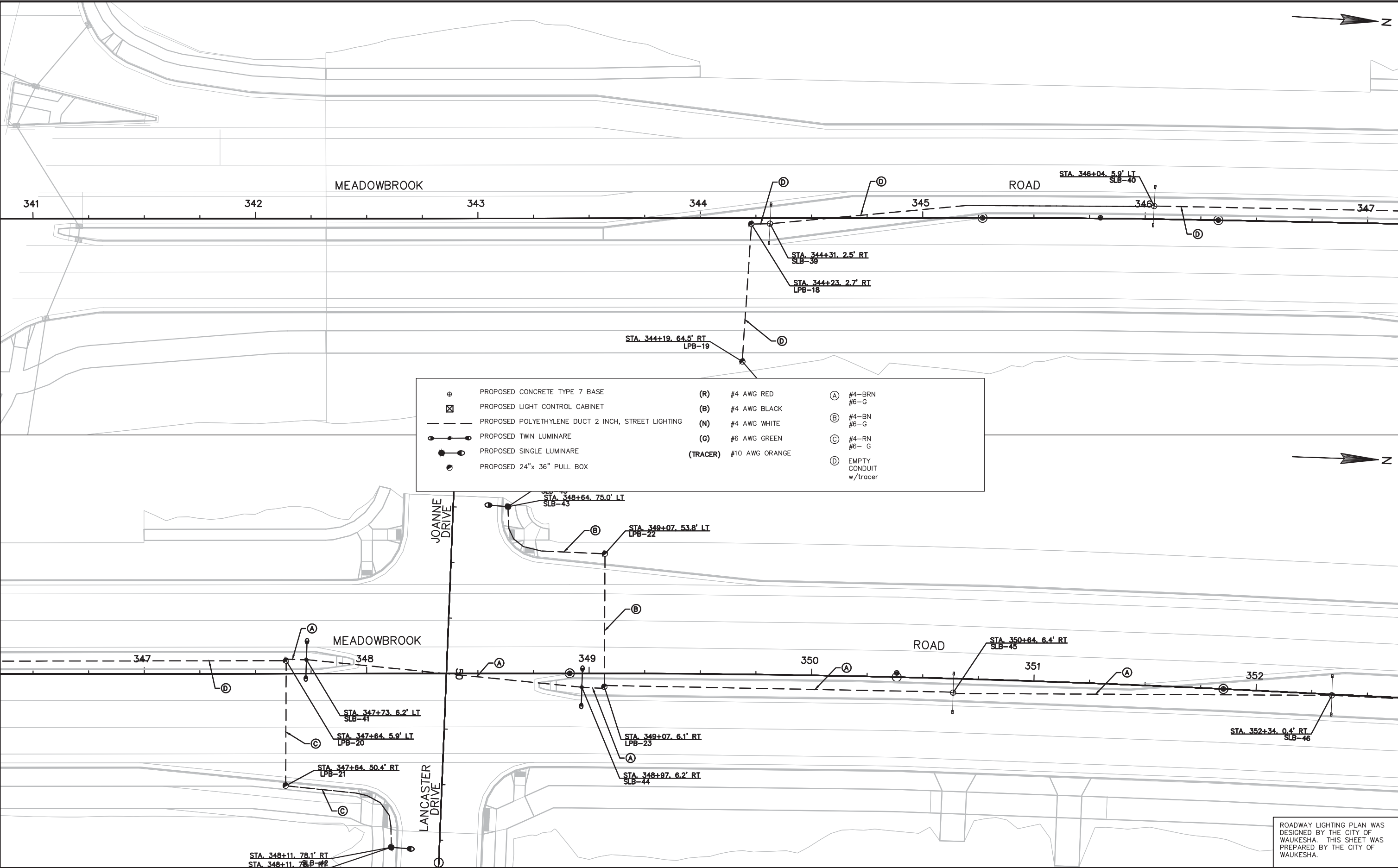
**12X4-FT RIPRAP OUTFALL
STABILIZATION DETAIL**

N.T.S.

FILE NAME : L:\Jobs\2015\20150236\CAD\Site\dwg\00-C-00-Details-0236.dwg

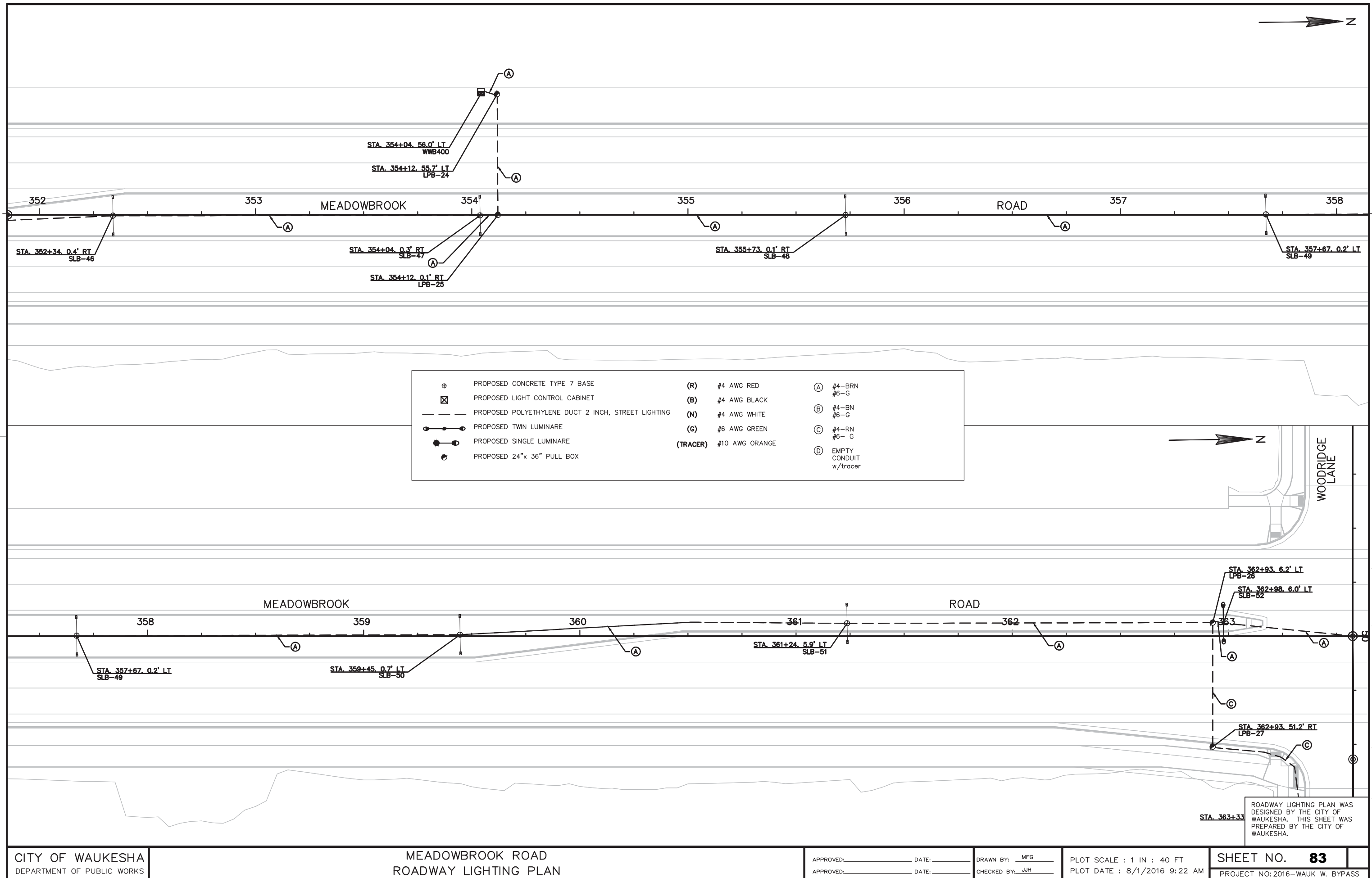


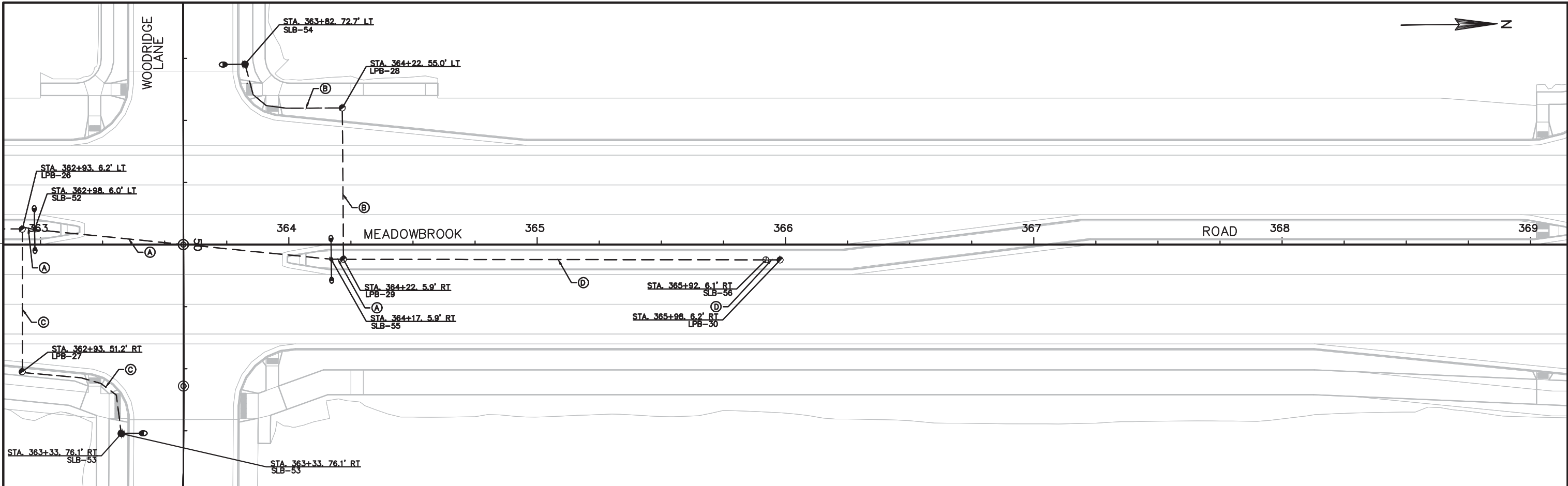
FILE NAME : S:\Wauk_Co\WaukCity\Gov\150253 Waukesha Bypass\VDGN\PlanSheets\023202.ps.dgn



ROADWAY LIGHTING PLAN WAS
DESIGNED BY THE CITY OF
WAUKESHA. THIS SHEET WAS
PREPARED BY THE CITY OF
WAUKESHA.

FILE NAME : O:\PROJECTS\2016_Waukesha West Bypass\Street Lights\Z-001-003-ByPass_Lighting_Plan-City Project.dwg

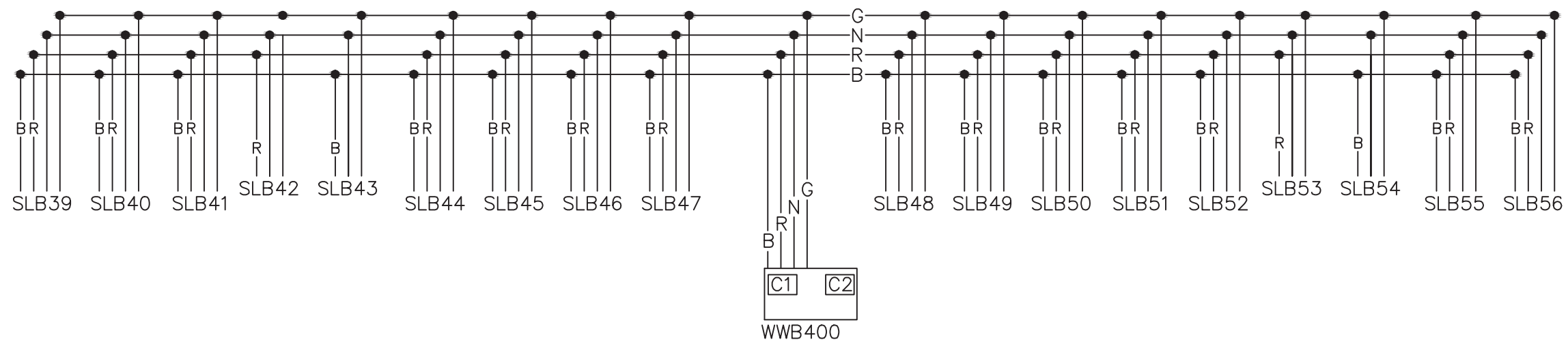




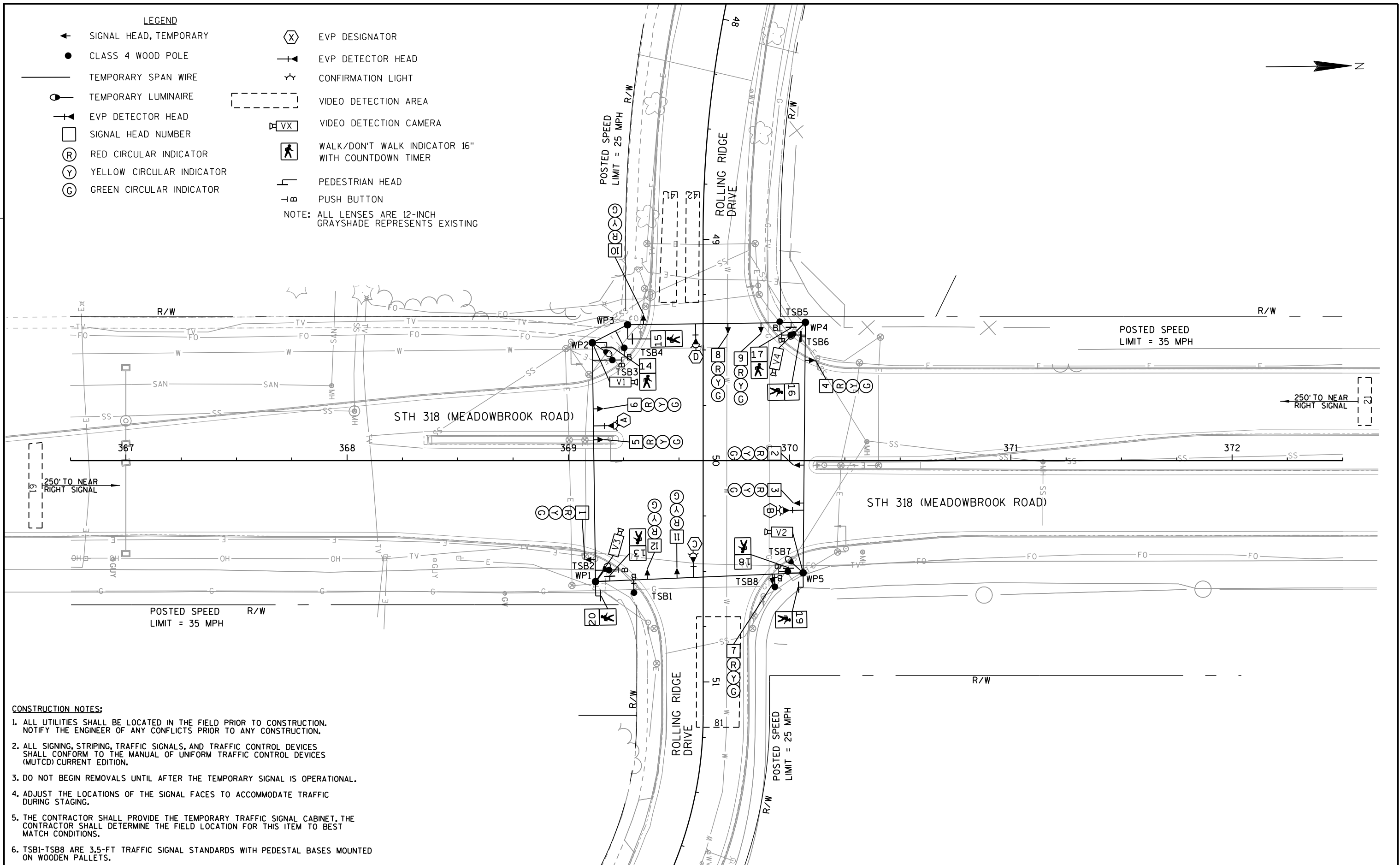
	PROPOSED CONCRETE TYPE 7 BASE	(R)	#4 AWG RED	(A)	#4-BRN #6-G
	PROPOSED LIGHT CONTROL CABINET	(B)	#4 AWG BLACK	(B)	#4-BN #6-G
	PROPOSED POLYETHYLENE DUCT 2 INCH, STREET LIGHTING	(N)	#4 AWG WHITE	(C)	#4-RN #6-G
	PROPOSED TWIN LUMINARE	(G)	#6 AWG GREEN	(D)	EMPTY CONDUIT w/tracer
	PROPOSED SINGLE LUMINARE	(TRACER)	#10 AWG ORANGE		
	PROPOSED 24"x 36" PULL BOX				

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FILE NAME : O:_PROJECTS\2016_Waukesha West Bypass\Street Lights\Z-001-003-ByPass_Lighting_Plan-City Project.dwg



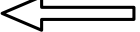
ROADWAY LIGHTING PLAN WAS
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WAUKESHA.

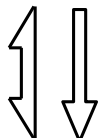


- CONSTRUCTION NOTES:**
1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
 2. ALL SIGNING, STRIPING, TRAFFIC SIGNALS, AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
 3. DO NOT BEGIN REMOVALS UNTIL AFTER THE TEMPORARY SIGNAL IS OPERATIONAL.
 4. ADJUST THE LOCATIONS OF THE SIGNAL FACES TO ACCOMMODATE TRAFFIC DURING STAGING.
 5. THE CONTRACTOR SHALL PROVIDE THE TEMPORARY TRAFFIC SIGNAL CABINET. THE CONTRACTOR SHALL DETERMINE THE FIELD LOCATION FOR THIS ITEM TO BEST MATCH CONDITIONS.
 6. TSB1-TSB8 ARE 3.5-FT TRAFFIC SIGNAL STANDARDS WITH PEDESTAL BASES MOUNTED ON WOODEN PALLETES.

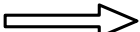
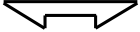
	HEAD NUMBERS	F L A S H
Ø1		
Ø2	4,5,6	R
Ø3		
Ø4	10,11,12	R
Ø5		
Ø6	1,2,3	R
Ø7		
Ø8	7,8,9	R
Ø2P	15,16	
Ø4P	13,14	
Ø6P	19,20	
Ø8P	17,18	
OLE		
OLF		
OLG		
OLH		

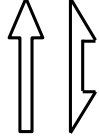
RING 1

NOT USED	
NOT USED	
Ø1	Ø2

NOT USED	
Ø3	Ø4

RING 2

NOT USED	
NOT USED	
Ø5	Ø6

NOT USED	
Ø7	Ø8

BARRIER



DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	21	42	81					
CALLED PHASE	2	4	8					
CALL OPTION	X	X	X					
DELAY TIME			X					
EXTENTION OPTION	X	X	X					
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	41	61						
CALLED PHASE	4	6						
CALL OPTION	X	X						
DELAY TIME	X							
EXTENTION OPTION	X	X						
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

19	17	23	21	27	25	31	29

20	18	24	22	28	26	32	30

DETECTOR INPUT	
PLAN LOOP DETECTOR*(S)	
CALLED PHASE	
CALL OPTION	
DELAY TIME	
EXTENTION OPTION	
EXTEND TIME	
USE ADDED INITIAL	
CROSS SWITCH PHASE	

DETECTOR INPUT	
PLAN LOOP DETECTOR*(S)	
CALLED PHASE	
CALL OPTION	
DELAY TIME	
EXTENTION OPTION	
EXTEND TIME	
USE ADDED INITIAL	
CROSS SWITCH PHASE	

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2	X	6	MIN	X
3				
4		8		X
5				
6	X	2	MIN	X
7				
8		4		X

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT				
PHASE	2+6	6+2	4+8	8+4

AFTER PREEMPTION SEQUENCE 2+6 OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	X
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	
CELL MODEM	

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER	
CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS-

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

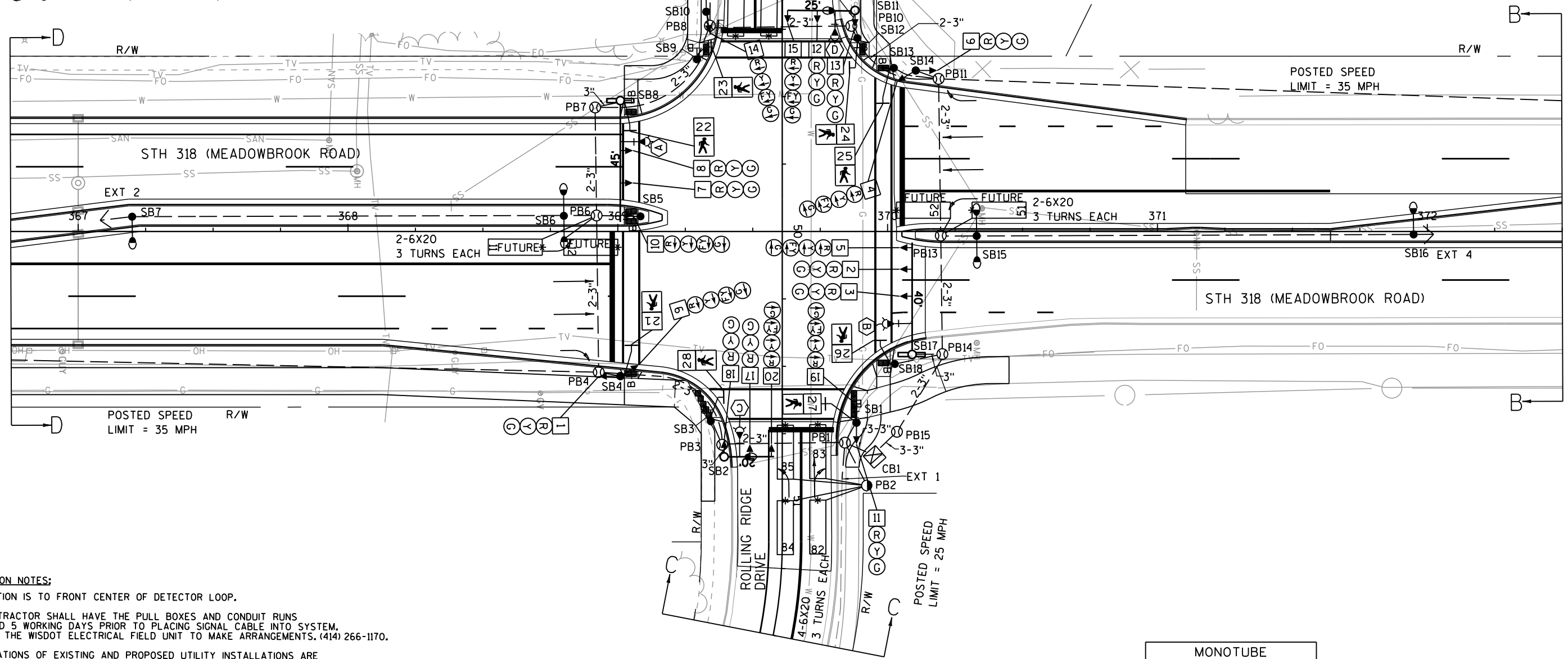
TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTION	

LEGEND

- | | | | |
|-------|---|-----|---------------------------|
| —●— | LOOP DETECTOR CONDUIT 1" NONMETALLIC | (R) | RED CIRCULAR INDICATOR |
| ←● | SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE | (Y) | YELLOW CIRCULAR INDICATOR |
| (XX)○ | MONOTUBE BASE, POLE, 15'-30' ARM | (G) | GREEN CIRCULAR INDICATOR |
| (XX)□ | MONOTUBE BASE, POLE, 35'-55' ARM | (R) | RED ARROW |
| —●— | PEDESTRIAN HEAD WITH PUSH BUTTON | (Y) | YELLOW ARROW |
| —●— | PUSH BUTTON | (G) | GREEN ARROW |
| □ | SIGNAL HEAD NUMBER | (X) | EVP DESIGNATOR |
| ⚡ | WALK/DON'T WALK INDICATOR 16" WITH COUNTDOWN TIMER | —●— | EVP DETECTOR HEAD |
| ⊠ | CONTROL CABINET | —●— | CONFIRMATION LIGHT |
| --- | NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED | ○ | PULL BOX, 24" X 42" |
| *□* | LOOP DETECTOR IN 1" NONMETALLIC CONDUIT | ● | PULL BOX, 24" X 36" |
| ● | LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE | | |

EVP CONSTRUCTION NOTES:

1. INSTALL THE TRAFFIC SIGNAL EMERGENCY VEHICLE PRE-EMPTION DETECTOR CABLE TO RUN CONTINUOUSLY (WITHOUT SPLICES) FROM THE CABINET TO THE DETECTOR HEADS. MOUNT THE EVP DETECTOR HEADS AND WIRE THEM PER MANUFACTURER INSTRUCTIONS.
2. THE DEPARTMENT WILL DETERMINE THE EXACT LOCATION OF THE EVP DETECTORS TO ENSURE THAT THE INSTALLATION DOES NOT CREATE A SIGHT OBSTRUCTION.
3. ALL EVP DETECTOR CABLE SHALL BE ROUTED THROUGH EXISTING SIGNAL BASES, PULL BOXES, AND CONDUIT AS INDICATED. PROVIDE ENOUGH CABLE TO ALLOW 10 FEET OF SLACK IN THE CABINET, IN EACH PULL BOX, AND IN THE SIGNAL POLE HANDHOLE.
4. CABINET WIRING WILL BE DONE BY THE CONTRACTOR. THE CONTRACTOR SHALL INSTALL AND TERMINATE THE EVP CABLE AS DESCRIBED AND SHALL LABEL EACH CABLE AS NOTED ON THE PLAN SHEETS (I.E. EVP A-B-C-D).



CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. ALL LUMINAIRES ARE LED-C UNLESS OTHERWISE NOTED.
5. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.

MONOTUBE STRUCTURE NUMBERS	
SB2	= S-67-1378
SB8	= S-67-1379
SB11	= S-67-1380
SB17	= S-67-1381

CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS

MEADOWBROOK RD
TRAFFIC SIGNAL PLAN

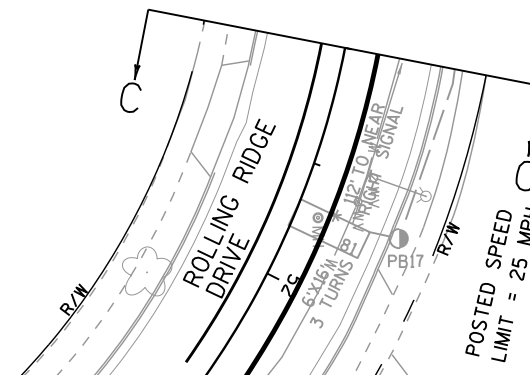
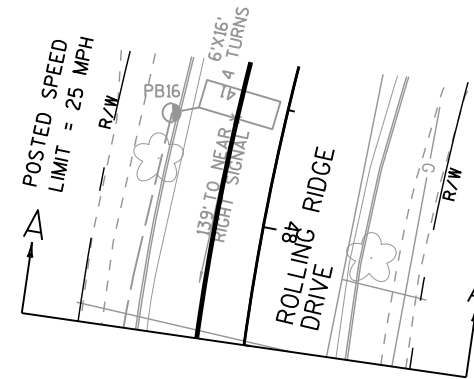
APPROVED: _____ DATE: _____
APPROVED: _____ DATE: _____

DRAWN BY: _____
CHECKED BY: _____

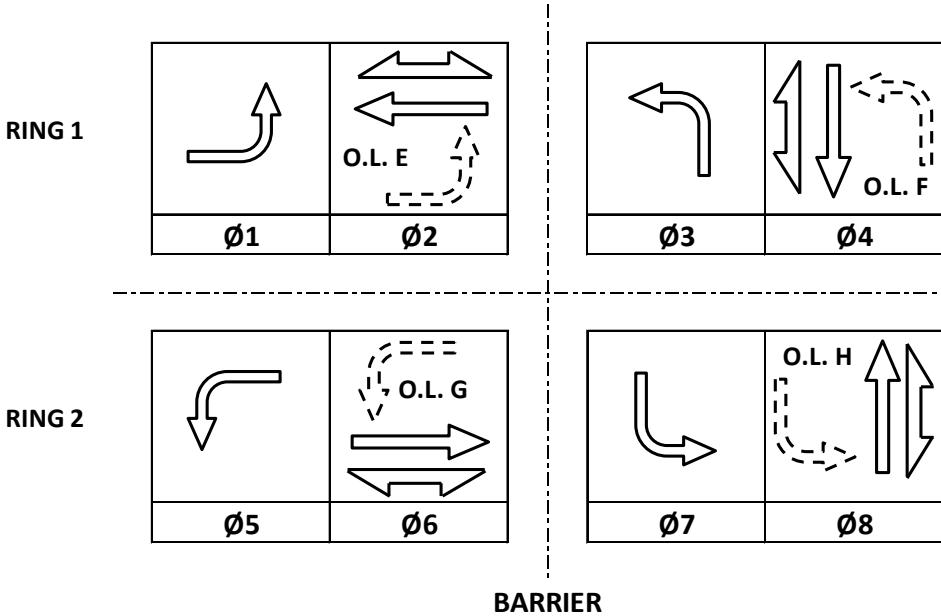
PLOT SCALE : 40.0000 sf / in.
PLOT DATE : 10/4/2016

SHEET NO. **88**
PROJECT NO: _____

FILE NAME : 024201-sp.dgn



	HEAD NUMBERS	F L A S H
Ø1	4,5	R
Ø2	6,7,8	R
Ø3	14,15	R
Ø4	16,17,18	R
Ø5	9,10	R
Ø6	1,2,3	R
Ø7	19,20	R
Ø8	11,12,13	R
Ø2P	23,24	
Ø4P	21,22	
Ø6P	27,28	
Ø8P	25,26	
OLE	4,5	-
OLF	14,15	-
OLG	9,10	-
OLH	19,20	-



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN	X
3		8		X
4		8		X
5		2		X
6	X	2	MIN	X
7		4		X
8		4		X

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT				
PHASE	2+5	6+1	4+7	8+3

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	X
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	
CELL MODEM	

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER	
CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS-

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	21	42	44	51	61	82	84
CALLED PHASE	FUTURE	2	4	4	FUTURE	6	8	8
CALL OPTION		X	X	X		X	X	X
DELAY TIME								
EXTENTION OPTION		X	X	X		X	X	X
EXTEND TIME								
USE ADDED INITIAL		X				X		
CROSS SWITCH PHASE								

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR*(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT
PLAN LOOP DETECTOR*(S)
CALLED PHASE
CALL OPTION
DELAY TIME
EXTENTION OPTION
EXTEND TIME
USE ADDED INITIAL
CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	12	41	43	45	52	81	83	85
CALLED PHASE	FUTURE	4	4	4	FUTURE	8	8	8
CALL OPTION		X	X	X		X	X	X
DELAY TIME			X	X			X	X
EXTENTION OPTION		X	X	X		X	X	X
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR*(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT
PLAN LOOP DETECTOR*(S)
CALLED PHASE
CALL OPTION
DELAY TIME
EXTENTION OPTION
EXTEND TIME
USE ADDED INITIAL
CROSS SWITCH PHASE

PROJECT ID:
INTERSECTION: STH 318 (MEADOWBROOK RD) & ROLLING RIDGE DR

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORANGE

CB1 TO	JUMPER	# OF COND. AWG 14	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON	OTHER
				RED	YELLOW	GREEN	<RED	<YELLOW>	<FL YELLOW>	<GREEN>	D/WALK	WALK		
SB1		12	11	RED/BLK	ORG/BLK	GRN/BLK								
			19				RED	ORG	BLK/WHT	GRN				
			27								BLK	BLU		
			B										WHT/BLK	
SB2		12	17	RED	ORG	GRN								
			18	RED	ORG	GRN								
			20				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK				
SB3		7	28								BLK	BLU		
			B										WHT/BLK	
SB4		12	1	RED	ORG	GRN								
			9				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK				
			21								BLK	BLU		
			B										WHT/BLK	
SB5		7	B										WHT/BLK	
SB8		12	7	RED	ORG	GRN								
			8	RED	ORG	GRN								
			10				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK				
			22								BLK	BLU		
			B										WHT/BLK	
SB9		7	23								BLK	BLU		
			B										WHT/BLK	
SB10		12	14				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK				
			16	RED	ORG	GRN								
SB11		12	12	RED	ORG	GRN								
			13	RED	ORG	GRN								
			15				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK				
SB12		7	24								BLK	BLU		
			B										WHT/BLK	
SB13		7	25								BLK	BLU		
			B										WHT/BLK	
SB14		12	4				RED	ORG	BLK/WHT	GRN				
			6	RED/BLK	ORG/BLK	GRN/BLK								
SB17		12	2	RED	ORG	GRN								
			3	RED	ORG	GRN								
			5				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK				
SB18		7	26								BLK	BLU		
			B										WHT/BLK	

- NOTES:
- 1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
 - 2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
 - 3. AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART.
CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.
 - 4. "OTHER" COLUMN MAY INCLUDE SHADOW BOX (BLANK OUT) SIGN.

CABLE ROUTING CONTINUED

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	SB17
SB17	SB18
SB18	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
CB1	PB1
SB2	PB3
SB4	PB4
SB5	PB6
SB8	PB7
SB10	PB8
SB12	PB10
SB14	PB11
SB17	PB13
SB17	PB14
CB1	PB15

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB8 (HEAD A)
CB1	SB17 (HEAD B)
CB1	SB2 (HEAD C)
CB1	SB11 (HEAD D)

LIGHTING UF 10 AWG W/GROUND	
FROM	TO
CB1	SB2
SB2	SB6
SB6	SB7
CB1	SB15
SB15	SB16
SB15	SB11

CONDUIT				
		652.0225	652.0235	652.0615
		CONDUIT RIGID	CONDUIT RIGID	CONDUIT
		NONMETALLIC	NONMETALLIC	SPECIAL
		SCHEDULE 40	SCHEDULE 40	3-INCH
		2-INCH	3-INCH	
FROM	TO	L.F.	L.F.	L.F.
CB1	PB1	--	45	--
PB1	EXT 1	15	--	--
PB1	PB2	20	--	--
PB1	SB1	10	--	--
PB1	PB3	--	--	90
PB3	SB2	--	5	--
PB3	SB3	10	--	--
PB3	PB4	--	120	--
PB4	PB5	285	--	--
PB4	SB4	10	--	--
PB4	PB6	--	--	120
PB6	SB5	20	--	--
PB6	SB6	15	--	--
SB6	SB7	160	--	--
SB7	EXT 2	10	--	--
PB6	PB7	--	--	80
PB7	SB8	--	10	--
PB7	PB8	--	120	--

CONDUIT CONTINUED				
		652.0225	652.0235	652.0615
		CONDUIT RIGID	CONDUIT RIGID	CONDUIT
		NONMETALLIC	NONMETALLIC	SPECIAL
		SCHEDULE 40	SCHEDULE 40	3-INCH
		2-INCH	3-INCH	
FROM	TO	L.F.	L.F.	L.F.
PB8	SB9	15	--	--
PB8	SB10	10	--	--
PB8	PB9	20	--	--
PB9	EXT 3	10	--	--
PB8	PB10	--	--	110
PB10	SB11	--	10	--
PB10	SB12	5	--	--
PB10	PB11	--	80	--
PB11	SB13	20	--	--
PB11	SB14	10	--	--
PB11	PB12	290	--	--
PB11	PB13	--	--	120
PB13	SB15	15	--	--
SB15	SB16	165	--	--
SB16	EXT 4	10	--	--
PB13	PB14	--	--	90
PB14	SB17	--	15	--
PB14	SB18	20	--	--
PB14	PB15	--	70	--
PB15	CB1	--	45	--
TOTAL		1145	520	610

TRAFFIC DETECTOR LOOPS											
LOOP NO.	HOME RUN PB	LOCATION*		SIZE		NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE	652.0800	655.0700	655.0800
									CONDUIT	LOOP DETECTOR	LOOP DETECTOR
		STA	OFFSET	(FT)	X (FT)				LOOP DETECTOR L.F.	LEAD IN CABLE L.F.	LOOP DETECTOR WIRE L.F.
11	PB6	368+72.0	05.8' RT	6	X 20	3	CONCRETE	9F15-4A	96	195	302
12	PB6	369+00.0	05.9' RT	6	X 20	3	CONCRETE	9F15-4A	82	195	258
21	PB12	373+00.9	26.8' LT	6	X 20	4	CONCRETE	9F15-4A	74	460	311
41	PB16	EXISTING	EXISTING	6	X 16	4	CONCRETE	EXISTING	66	415	277
42	PB9	48+99.6	16.9' RT	6	X 20	3	CONCRETE	9F15-4A	72	285	227
43	PB9	49+27.5	17.3' RT	6	X 20	3	CONCRETE	9F15-4A	68	285	214
44	PB9	48+99.5	04.6' RT	6	X 20	3	CONCRETE	9F15-4B	68	285	214
45	PB9	49+27.5	05.0' RT	6	X 20	3	CONCRETE	9F15-4B	92	285	290
51	PB13	370+31.3	07.9' LT	6	X 20	3	CONCRETE	9F15-4A	80	110	252
52	PB13	370+03.3	07.9' LT	6	X 20	3	CONCRETE	9F15-4A	68	110	214
61	PB5	366+11.4	24.0' RT	6	X 20	4	CONCRETE	9F15-4A	78	420	328
81	PB17	EXISTING	EXISTING	6	X 16	3	CONCRETE	EXISTING	64	145	202
82	PB2	50+99.6	13.2' LT	6	X 20	3	CONCRETE	9F15-4A	84	50	265
83	PB2	50+71.6	13.2' LT	6	X 20	3	CONCRETE	9F15-4A	84	50	265
84	PB2	50+99.9	01.2' LT	6	X 20	3	CONCRETE	9F15-4B	108	50	340
85	PB2	50+71.9	01.2' LT	6	X 20	3	CONCRETE	9F15-4B	108	50	340
TOTAL									1292	3390	4299

* LOCATION IS TO FRONT CENTER OF DETECTOR LOOP
9F15-4A LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
9F15-4B LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)

PULL BOXES				
		653.0135	653.0140	
		PULL BOXES	PULL BOXES	
		STEEL	STEEL	
PULL BOX	LOCATION	24x36-INCH	24x42-INCH	
NO.	STA	OFFSET	EACH	EACH
PB1	50+78.2	23.1' LT	--	1
PB2	50+94.2	31.4' LT	1	--
PB3	50+79.1	22.3' RT	--	1
PB4	368+92.9	52.2' RT	--	1
PB5	366+11.8	46.3' RT	1	--
PB6	368+92.1	05.9' LT	--	1
PB7	368+91.6	46.0' LT	--	1
PB8	49+23.7	26.8' RT	--	1
PB9	49+03.4	26.6' RT	1	--
PB10	49+23.8	25.6' LT	--	1
PB11	370+18.9	56.6' LT	--	1
PB12	373+01.6	46.8' LT	1	--
PB13	370+19.7	01.5' RT	--	1
PB14	370+20.3	45.5' RT	--	1
PB15	50+74.3	42.5' LT	--	1
TOTAL			4	11

CONCRETE BASES							
			654.0101	654.0105	SPV.0060.01	SPV.0060.02	654.0217
			CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE CONTROL
			BASES	BASES	BASES	BASES	CABINET BASES
SIGNAL	LOCATION		TYPE 1	TYPE 5	TYPE 10	TYPE 13	TYPE 9 SPECIAL
BASE NO.	STA	OFFSET	EACH	EACH	EACH	EACH	EACH
CB1	50+82.8	33.6' LT	--	--	--	--	1
SB1	50+70.9	27.5' LT	1	--	--	--	--
SB2	50+83.6	21.5' RT	--	--	1	--	--
SB3	50+70.4	26.5' RT	1	--	--	--	--
SB4	369+01.0	53.6' RT	1	--	--	--	--
SB5	369+08.4	05.6' LT	1	--	--	--	--
SB6	368+80.0	05.8' LT	--	1	--	--	--
SB7	367+20.0	05.5' LT	--	1	--	--	--
SB8	369+01.0	48.5' LT	--	--	--	1	--
SB9	49+36.1	31.6' RT	1	--	--	--	--
SB10	49+18.5	28.1' RT	1	--	--	--	--
SB11	49+18.0	27.0' LT	--	--	1	--	--
SB12	49+28.3	27.8' LT	1	--	--	--	--
SB13	370+02.3	60.7' LT	1	--	--	--	--
SB14	370+10.4	59.7' LT	1	--	--	--	--
SB15	370+33.0	01.7' RT	--	1	--	--	--
SB16	371+95.0	01.1' RT	--	1	--	--	--
SB17	370+09.1	45.6' RT	--	--	--	1	--
SB18	370+02.7	49.1' RT	1	--	--	--	--
TOTAL			10	4	2	2	1

TRAFFIC SIGNAL CABLE AND WIRE			
		655.0230	655.0240*
		CABLE	CABLE
		TRAFFIC SIGNAL	TRAFFIC SIGNAL
		5-14 AWG	7-14 AWG
FROM	TO	L.F.	L.F.
SB1	HEAD 11	20	--
SB1	HEAD 19	--	25
SB1	HEAD 27	20	--
SB2	HEAD 17	40	--
SB2	HEAD 18	20	--
SB2	HEAD 20	--	50
SB3	HEAD 28	20	--
SB4	HEAD 1	20	--
SB4	HEAD 9	--	25
SB4	HEAD 21	20	--
SB8	HEAD 7	65	--
SB8	HEAD 8	50	--
SB8	HEAD 10	--	75
SB8	HEAD 22	20	--
SB9	HEAD 23	20	--
SB10	HEAD 14	--	25
SB10	HEAD 16	20	--
SB11	HEAD 12	45	--
SB11	HEAD 13	20	--
SB11	HEAD 15	--	55
SB12	HEAD 24	20	--
SB13	HEAD 25	20	--
SB14	HEAD 4	--	25
SB14	HEAD 6	20	--
SB17	HEAD 2	65	--
SB17	HEAD 3	55	--
SB17	HEAD 5	--	70
SB18	HEAD 26	20	--
TOTAL		600	350

* QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE			
		655.0240*	655.0260
		CABLE	CABLE
		TRAFFIC SIGNAL	TRAFFIC SIGNAL
		7-14 AWG	12-14 AWG
FROM	TO	L.F.	L.F.
CB1	SB1	--	70
CB1	SB2	--	110
CB1	SB3	115	--
CB1	SB4	--	175
CB1	SB5	245	--
CB1	SB8	--	275
CB1	SB9	310	--
CB1	SB10	--	305
CB1	SB11	--	250
CB1	SB12	245	--
CB1	SB13	220	--
CB1	SB14	--	210
CB1	SB17	--	110
CB1	SB18	115	--
TOTAL		1250	1505

* QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE		
655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG		
FROM	TO	L.F.
CB1	SB1	40
SB1	SB2	75
SB2	SB3	30
SB3	SB4	95
SB4	SB5	105
SB5	SB8	85
SB8	SB9	100
SB9	SB10	40
SB10	SB11	90
SB11	SB12	30
SB12	SB13	80
SB13	SB14	45
SB14	SB17	145
SB17	SB18	50
SB18	CB1	85
CB1	PB1	30
SB2	PB3	20
SB4	PB4	25
SB5	PB6	35
SB8	PB7	25
SB10	PB8	25
SB12	PB10	20
SB14	PB11	25
SB17	PB13	75
SB17	PB14	30
CB1	PB15	30
TOTAL		1435

TRAFFIC SIGNAL CABLE AND WIRE			
655.0320 CABLE TYPE UF 2-10 AWG GROUNDED			
655.0615 ELECTRICAL WIRE LIGHTING 10 AWG			
FROM	TO	L.F.	L.F.
CB1	SB2	110	--
SB2	LUMIN	--	145
SB2	SB6	185	--
SB6	LUMIN	--	235
SB6	SB7	205	--
SB7	LUMIN	--	120
CB1	SB15	155	--
SB15	LUMIN	--	235
SB15	SB16	210	--
SB16	LUMIN	--	120
SB15	SB11	170	--
SB11	LUMIN	--	145
TOTAL		1035	1000

ELECTRICAL SERVICE METER BREAKER PEDESTAL	
656.0200.01 ELECTRICAL SERVICE METER BREAKER PEDESTAL	
LOCATION	L.S.
MEADOWBROOK RD & ROLLING RIDGE DR	1
TOTAL	1

POLES																
	657.0100	657.0255	657.0322	657.0405	657.0425	657.0430	657.0610	SPV.0060.03	658.0500	659.1125	SPV.0060.04	SPV.0060.05	SPV.0060.06	SPV.0060.07	SPV.0060.08	SPV.0060.09
	PEDESTAL	TRANSFORMER	TRAFFIC SIGNAL			TRAFFIC SIGNAL		TRAFFIC SIGNAL		PEDESTRIAN LUMINAIRES						
	BASES	BASES BREAKAWAY	POLES	STANDARDS	STANDARDS	STANDARDS	LUMINAIRE ARMS	LUMINAIRE ARMS	PUSH	UTILITY	POLES	POLES	MONOTUBE	MONOTUBE	MONOTUBE	MONOTUBE
		11 1/2-INCH	TYPE 5	ALUMINUM	ALUMINUM	ALUMINUM	SINGLE MEMBER	STEEL 15-FT	BUTTONS	LED C	TYPE 10	TYPE 12	ARMS	ARMS	ARMS	ARMS
SIGNAL BASE NO.	EACH	BOLT CIRCLE EACH	ALUMINUM EACH	3.5-FT EACH	15-FT EACH	10-FT EACH	4 1/2-INCH CLAMP 6-FT EACH	EACH	EACH	EACH	EACH	EACH	20-FT EACH	25-FT EACH	40-FT EACH	45-FT EACH
SB1	1	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--
SB2	--	--	--	--	--	--	--	1	--	1	1	--	1	--	--	--
SB3	1	--	--	--	--	1	--	--	1	--	--	--	--	--	--	--
SB4	1	--	--		1	--	--	--	1	--	--	--	--	--	--	--
SB5	1	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--
SB6		1	1		--	--	2	--	--	2	--	--	--	--	--	--
SB7	--	1	1	--	--	--	1	--	--	1	--	--	--	--	--	--
SB8	--	--	--	--	--	--	--	--	1	--	--	1	--	--	--	1
SB9	1	--	--	--	--	1	--	--	1	--	--	--	--	--	--	--
SB10	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--
SB11		--	--	--	--	--	--	1	--	1	1	--	--	1	--	--
SB12	1	--	--	--	--	1	--	--	1	--	--	--	--	--	--	--
SB13	1	--	--	--	--	1	--	--	1	--	--	--	--	--	--	--
SB14	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--
SB15		1	1	--	--	--	2	--	--	2	--	--	--	--	--	--
SB16	--	1	1	--	--	--	1	--	--	1	--	--	--	--	--	--
SB17	--	--	--	--	--	--	--	--	--	--	--	1	--	--	1	--
SB18	1	--	--	--	--	1	--	--	1	--	--	--	--	--	--	--
TOTAL	10	4	4	1	4	5	6	2	9	8	2	2	1	1	1	1

FACES												
SIGNAL BASE NO.	SIGNAL HEAD NO.	658.0110	658.0115	658.0215	658.0220	658.0600	658.0605	658.0610	658.0615	658.0620	658.0625	658.0635
		TRAFFIC	TRAFFIC	BACKPLATES	BACKPLATES	LED MODULES	LED MODULES	LED MODULES	LED MODULES	LED MODULES	LED MODULES	LED MODULES
		SIGNAL FACE	SIGNAL FACE	SIGNAL FACE	SIGNAL FACE	12-INCH	12-INCH	12-INCH	12-INCH	12-INCH	12-INCH	PEDESTRIAN
		3-12 INCH	4-12 INCH	3 SECTION	4 SECTION	RED BALL	YELLOW BALL	GREEN BALL	RED ARROW	YELLOW ARROW	GREEN ARROW	COUNTDOWN
		VERTICAL	VERTICAL	12-INCH	12-INCH							TIMER 16-INCH
		EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
SB4	HEAD 1	1	--	1	--	1	1	1	--	--	--	--
SB17	HEAD 2	1	--	1	--	1	1	1	--	--	--	--
SB17	HEAD 3	1	--	1	--	1	1	1	--	--	--	--
SB14	HEAD 4	--	1	--	1	--	--	--	1	2	1	--
SB17	HEAD 5	--	1	--	1	--	--	--	1	2	1	--
SB14	HEAD 6	1	--	1	--	1	1	1	--	--	--	--
SB8	HEAD 7	1	--	1	--	1	1	1	--	--	--	--
SB8	HEAD 8	1	--	1	--	1	1	1	--	--	--	--
SB4	HEAD 9	--	1	--	1	--	--	--	1	2	1	--
SB8	HEAD 10	--	1	--	1	--	--	--	1	2	1	--
SB1	HEAD 11	1	--	1	--	1	1	1	--	--	--	--
SB11	HEAD 12	1	--	1	--	1	1	1	--	--	--	--
SB11	HEAD 13	1	--	1	--	1	1	1	--	--	--	--
SB10	HEAD 14	--	1	--	1	--	--	--	1	2	1	--
SB11	HEAD 15	--	1	--	1	--	--	--	1	2	1	--
SB10	HEAD 16	1	--	1	--	1	1	1	--	--	--	--
SB2	HEAD 17	1	--	1	--	1	1	1	--	--	--	--
SB2	HEAD 18	1	--	1	--	1	1	1	--	--	--	--
SB1	HEAD 19	--	1	--	1	--	--	--	1	2	1	--
SB2	HEAD 20	--	1	--	1	--	--	--	1	2	1	--
SB4	HEAD 21	--	--	--	--	--	--	--	--	--	--	1
SB8	HEAD 22	--	--	--	--	--	--	--	--	--	--	1
SB9	HEAD 23	--	--	--	--	--	--	--	--	--	--	1
SB12	HEAD 24	--	--	--	--	--	--	--	--	--	--	1
SB13	HEAD 25	--	--	--	--	--	--	--	--	--	--	1
SB18	HEAD 26	--	--	--	--	--	--	--	--	--	--	1
SB1	HEAD 27	--	--	--	--	--	--	--	--	--	--	1
SB3	HEAD 28	--	--	--	--	--	--	--	--	--	--	1
TOTAL		12	8	12	8	12	12	12	8	16	8	8

TRAFFIC SIGNAL MOUNTING HARDWARE	
	658.5069.01
	SIGNAL MOUNTING HARDWARE
LOCATION	L.S.
MEADOWBROOK RD & ROLLING RIDGE DR	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS	
	661.0200.01
	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
LOCATION	L.S.
MEADOWBROOK RD & ROLLING RIDGE DR	1
TOTAL	1

TRAFFIC SIGNAL CABINET	
	SPV.0060.10
	TRAFFIC SIGNAL CONTROLLER AND CABINET 8-PHASE FULLY ACTUATED
LOCATION	EACH
MEADOWBROOK RD & ROLLING RIDGE DR	1
TOTAL	1

EMERGENCY VEHICLE PREEMPTION	
	SPV.0105.01
	EMERGENCY VEHICLE PREEMPTION SYSTEM
LOCATION	L.S.
MEADOWBROOK RD & ROLLING RIDGE DR	1
TOTAL	1

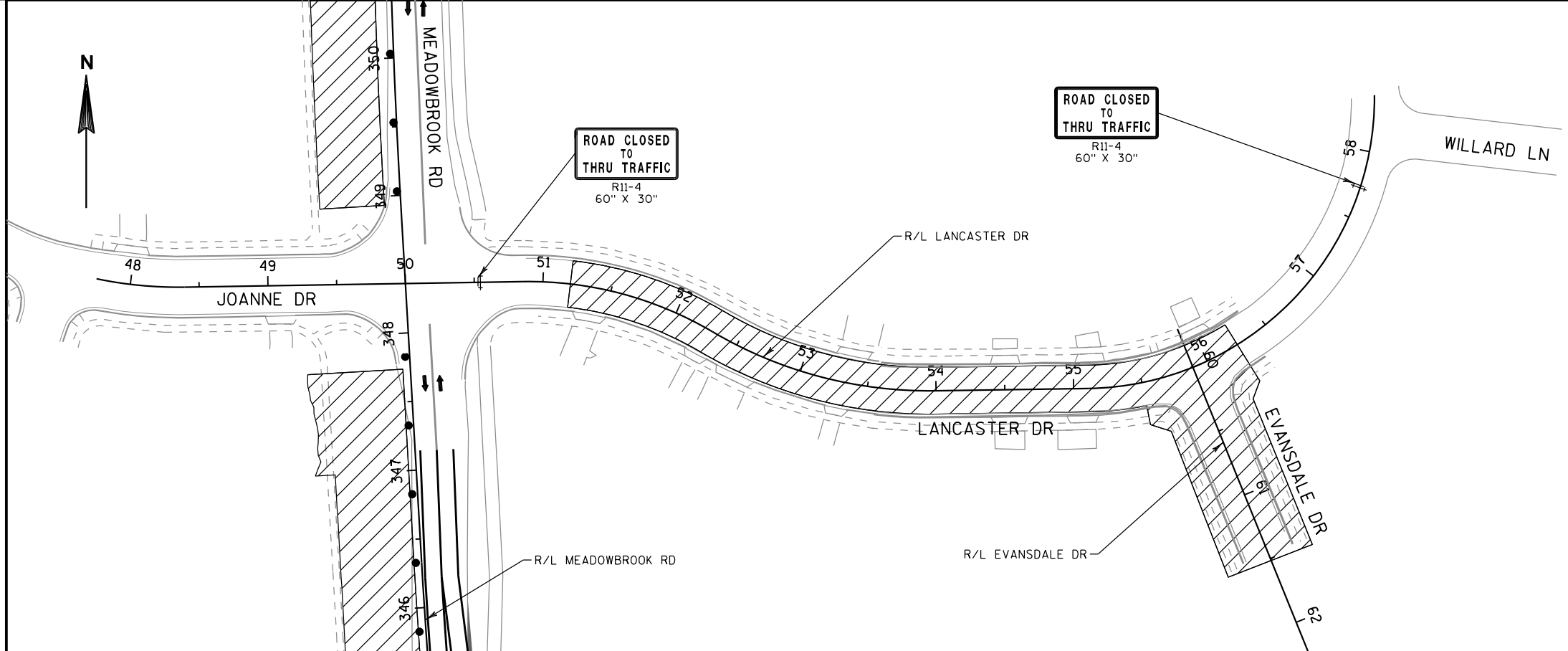
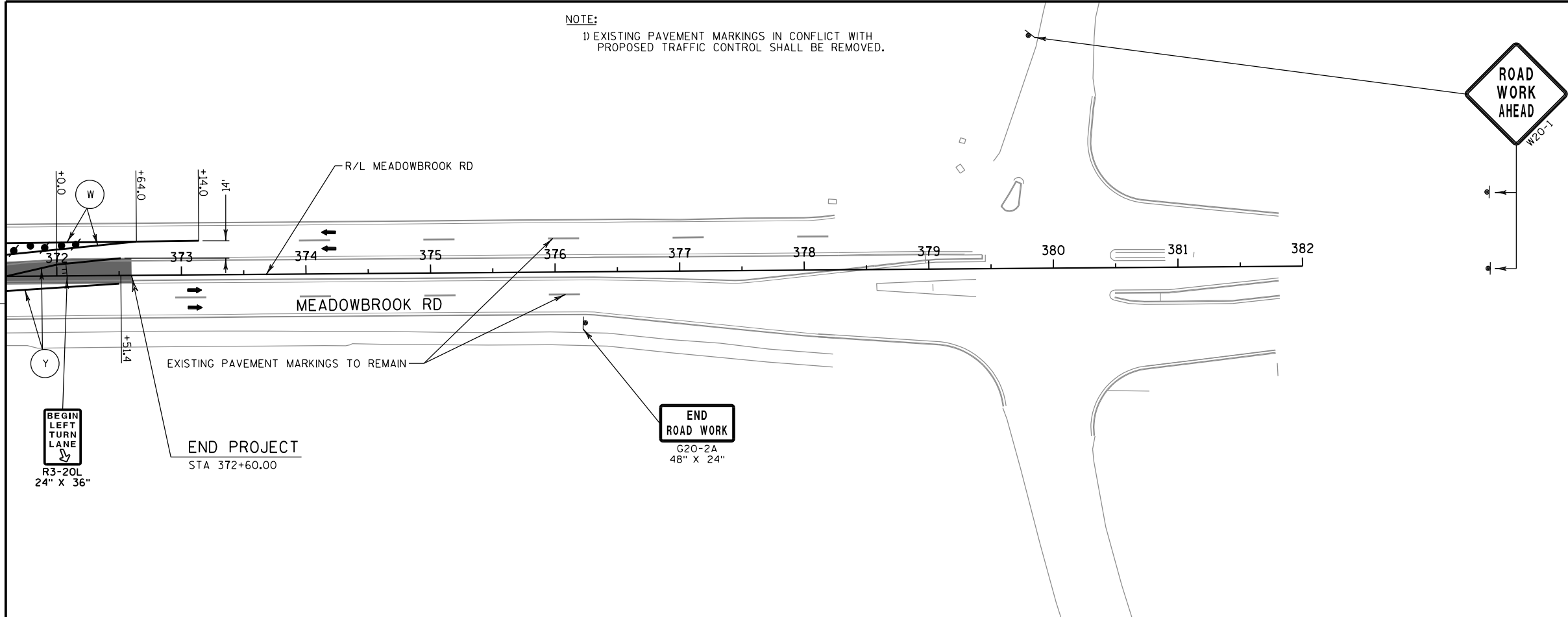
TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM FOR INTERSECTIONS	
SPV.0105.02	
TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM	
LOCATION	L.S.
MEADOWBROOK RD & ROLLING RIDGE DR	1
TOTAL	1

REMOVE TRAFFIC SIGNALS AND STREET LIGHTING	
SPV.0105.03	
REMOVE TRAFFIC SIGNALS AND STREET LIGHTING	
LOCATION	L.S.
MEADOWBROOK RD & ROLLING RIDGE DR	1
TOTAL	1

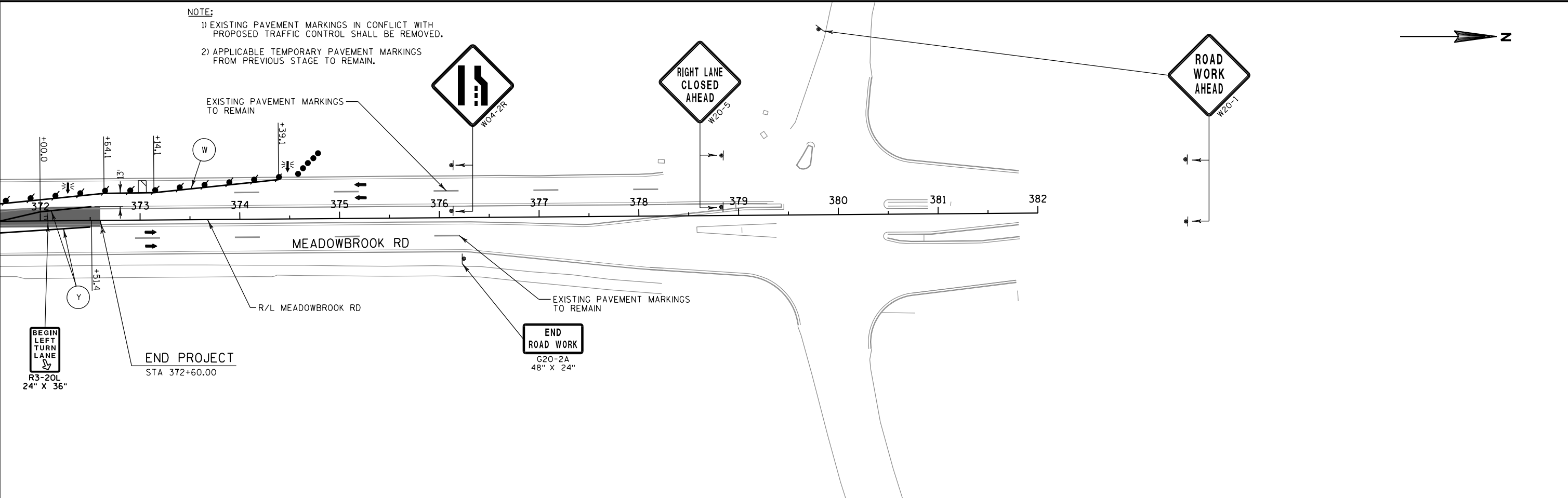
TRAFFIC CONTROL LEGEND

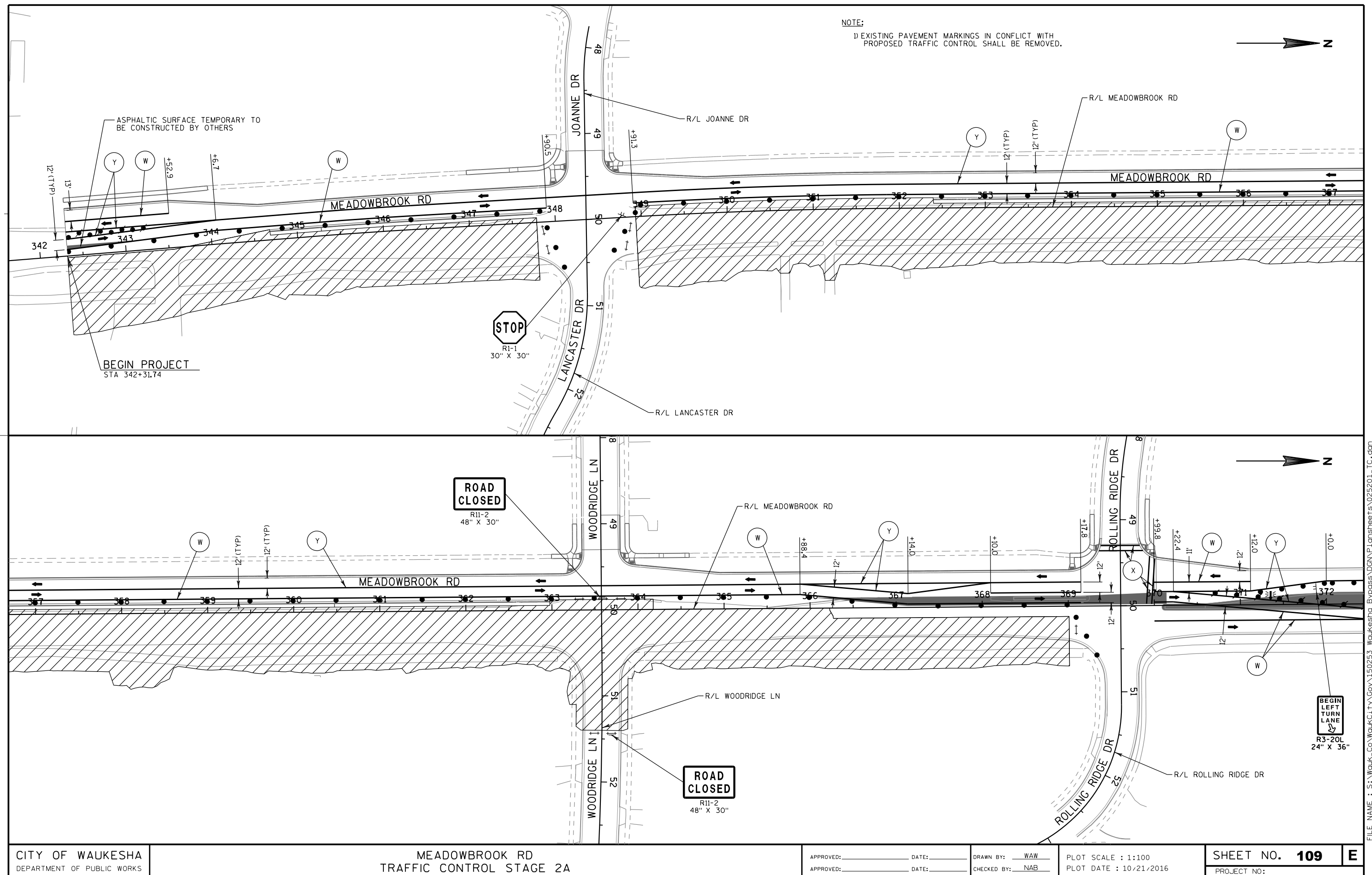
	TYPE III BARRICADE
	TYPE III BARRICADE WTH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE BOARD
	WORK AREA
	ASPHALTIC SURFACE TEMPORARY
	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 6-INCH (WHITE)

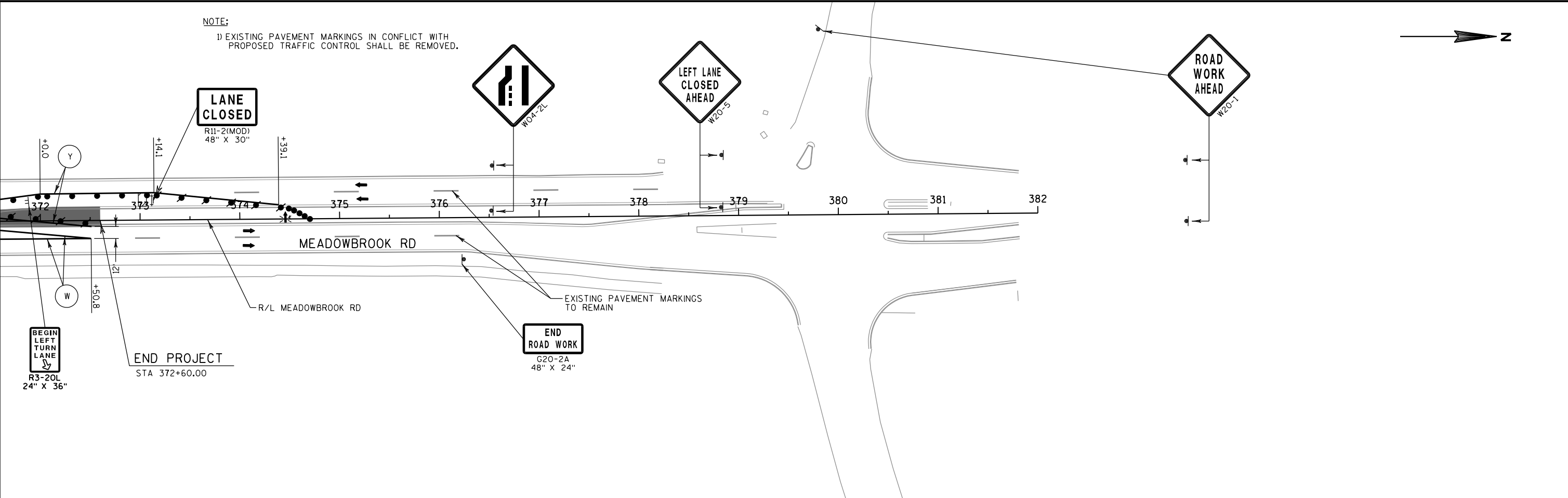
NOTE:
1) EXISTING PAVEMENT MARKINGS IN CONFLICT WITH
PROPOSED TRAFFIC CONTROL SHALL BE REMOVED.

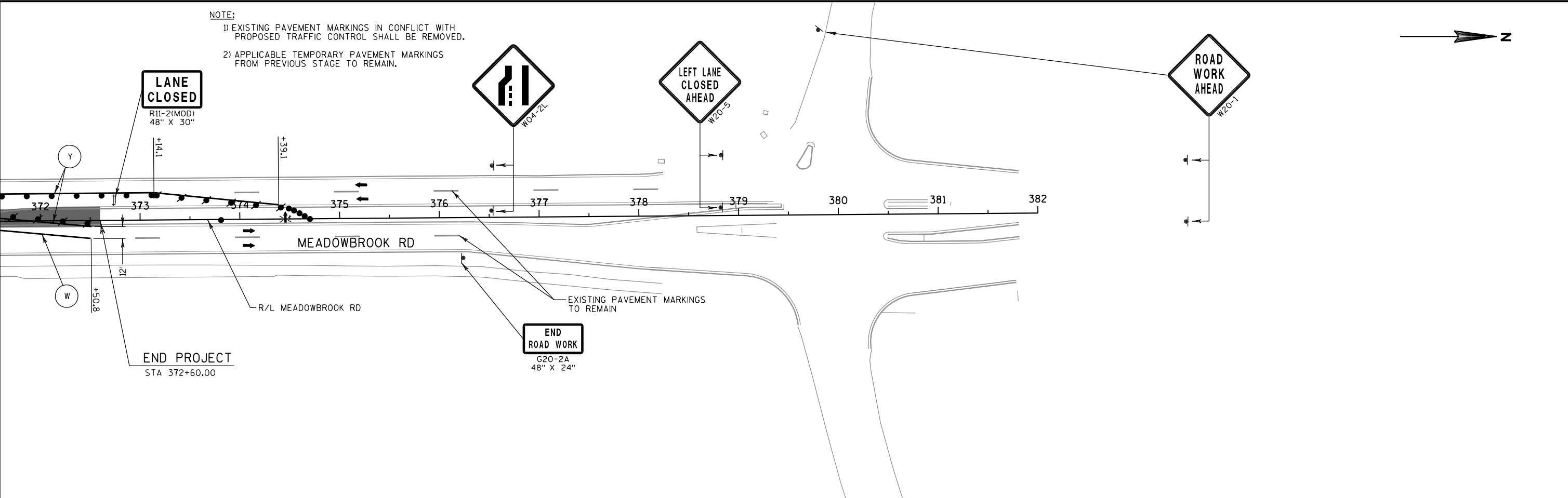


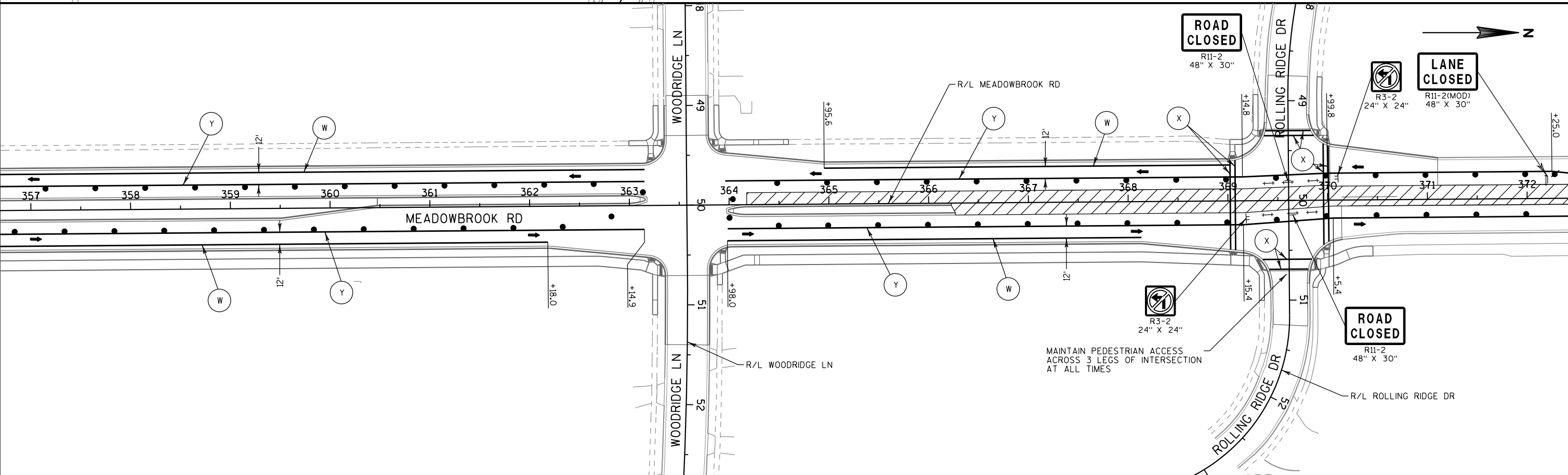
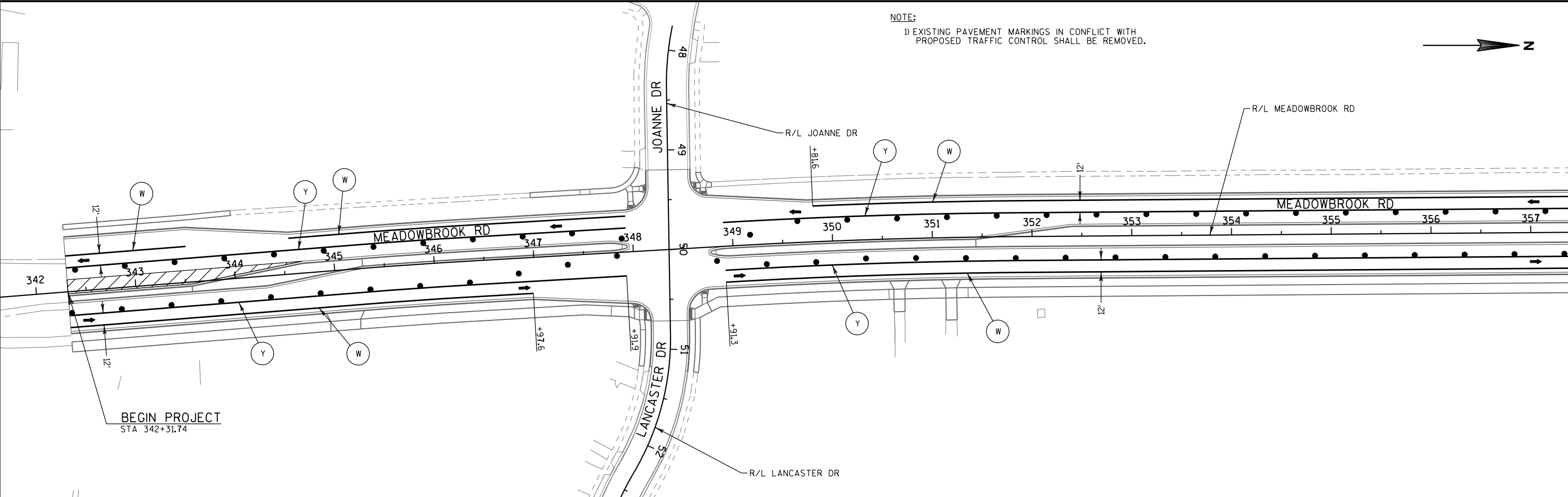
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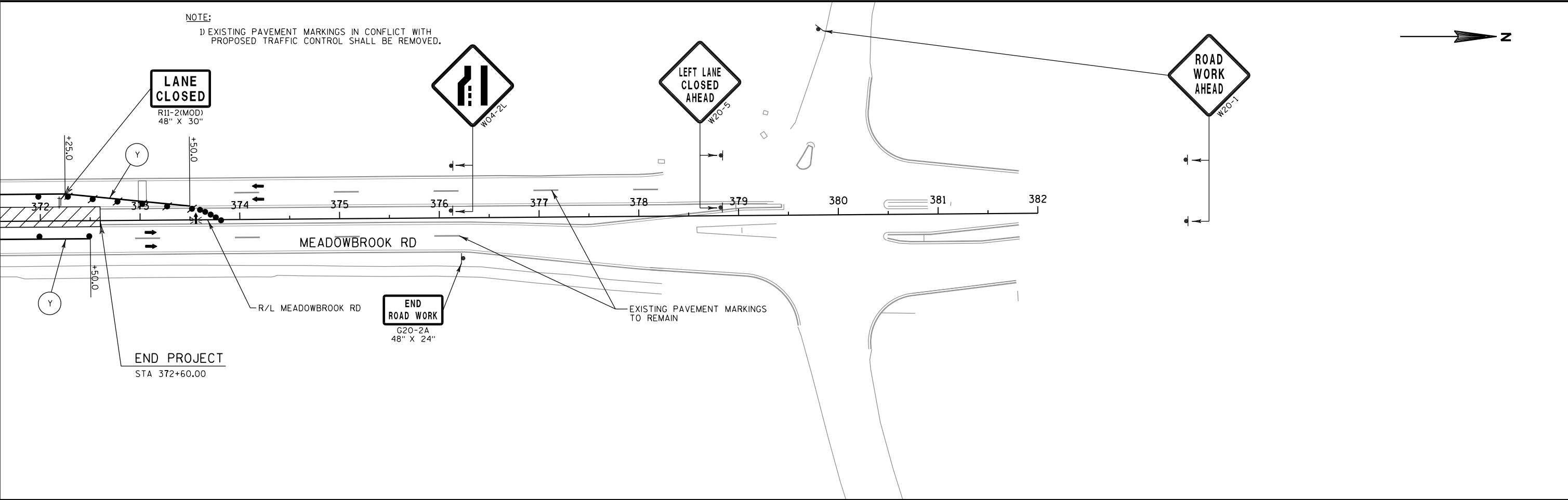








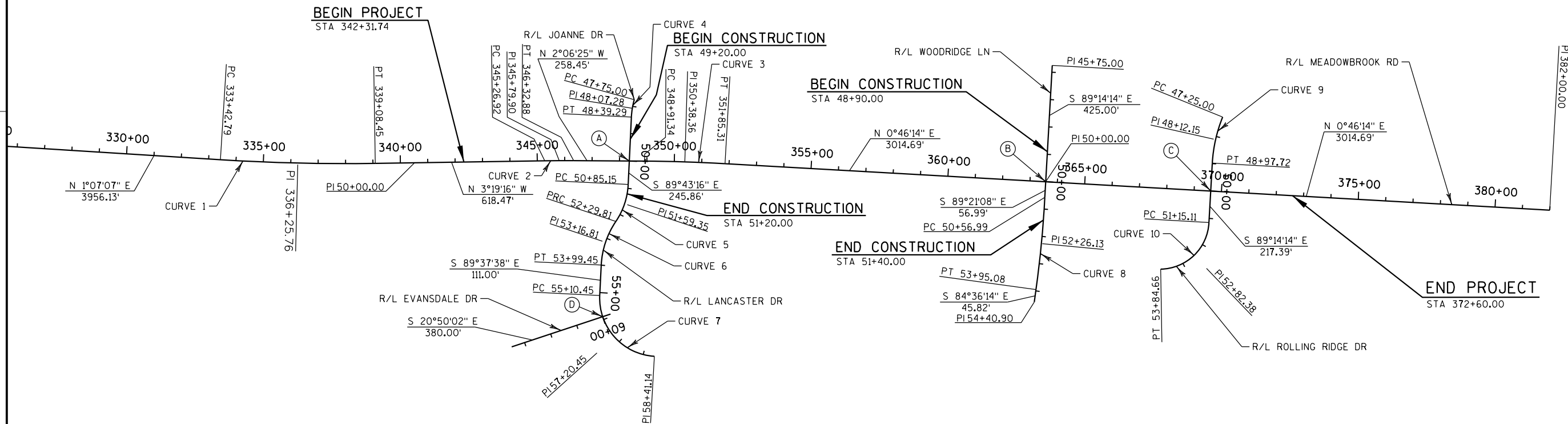
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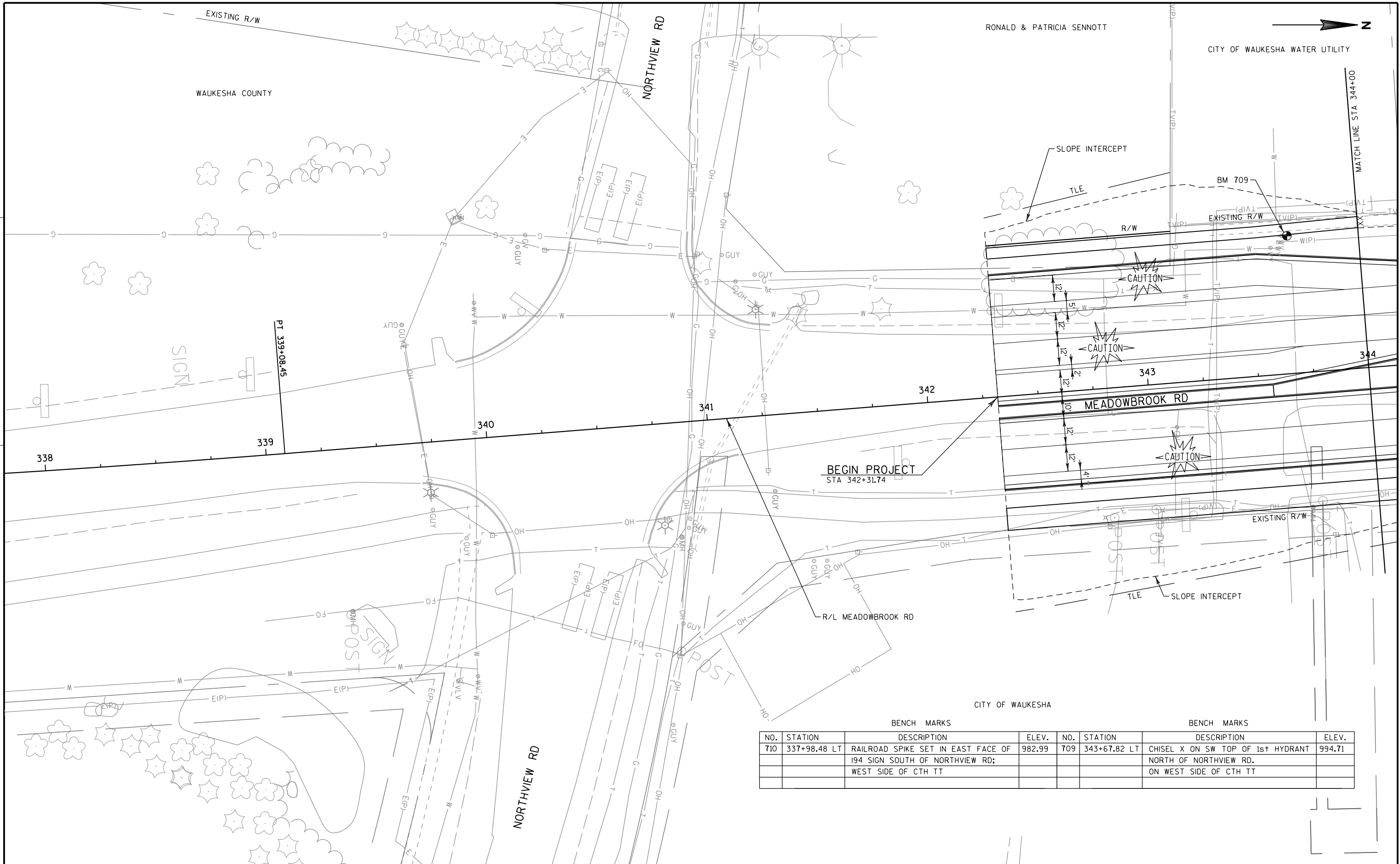


CURVE 1	CURVE 2	CURVE 3	CURVE 4	CURVE 5	CURVE 6	CURVE 7	CURVE 8	CURVE 9	CURVE 10
PC = 333+42.79 X = 668790.18 Y = 169548.50 PI= 336+25.76 X = 668795.70 Y = 169831.42 PT = 339+08.45 X = 668779.31 Y = 170113.91 R = 7300.00 DELTA = 4°26'23" LT D = 0° 47'06" L = 565.66 T = 282.97 BK = N 1°07'07" E AH = N 3°19'16" W S.E. = N.C.	PC = 345+26.92 X = 668743.48 Y = 170731.35 PI= 345+79.90 X = 668740.41 Y = 170784.24 PT = 346+32.88 X = 668738.46 Y = 170837.19 R = 5000.00 DELTA = 1°12'51" RT D = 1°08'45" L = 105.96 T = 52.98 BK = N 3°19'16" W AH = N 2°06'25" W S.E. = N.C.	PC = 348+91.34 X = 668728.96 Y = 171095.47 PI= 350+38.36 X = 668723.55 Y = 171242.38 PT = 351+85.31 X = 668725.53 Y = 171389.39 R = 5853.76 DELTA = 2°52'39" RT D = 0°58'44" L = 293.97 T = 147.02 BK = N 2°06'25" W AH = N 0°46'14" E S.E. = N.C.	PC = 47+75.00 X = 668506.56 Y = 171048.23 PI= 48+07.28 X = 668538.01 Y = 171040.98 PT = 48+39.29 X = 668570.29 Y = 171040.82 R = 290.07 DELTA = 12°41'56" LT D = 19°45'09" L = 64.29 T = 32.28 BK = S 77°01'20" E AH = S 89°43'16" E S.E. = N.C.	PC = 50+85.15 X = 668816.14 Y = 171039.63 PI= 51+59.35 X = 668890.34 Y = 171039.27 PRC = 52+29.81 X = 668953.46 Y = 171000.26 R = 263.64 DELTA = 31°26'03" RT D = 21°43'58" L = 144.66 T = 74.20 BK = S 89°43'16" E AH = S 58°16'58" E S.E. = N.C.	PRC = 52+29.81 X = 668953.46 Y = 171000.26 PI= 53+16.81 X = 669027.47 Y = 170954.52 PT = 53+99.45 X = 669114.47 Y = 170953.95 R = 310.09 DELTA = 31°20'40" LT D = 18°28'38" L = 169.64 T = 87.00 BK = S 58°16'58" E AH = S 89°37'38" E S.E. = N.C.	PC = 55+10.45 X = 669225.47 Y = 170953.23 PI= 57+20.45 X = 669435.46 Y = 170951.86 PT = 58+41.14 X = 669438.28 Y = 171161.84 R = 211.46 DELTA = 89°36'15" LT D = 27°05'45" L = 330.69 T = 210.00 BK = S 89°37'38" E AH = N 0°46'08" E S.E. = N.C.	PC = 50+56.99 X = 668798.28 Y = 172560.86 PI= 52+26.13 X = 668967.41 Y = 170951.86 PT = 53+95.08 X = 669135.80 Y = 172543.04 R = 4079.42 DELTA = 4°44'54" RT D = 1°24'16" L = 338.09 T = 169.14 BK = S 89°21'08" E AH = S 84°36'14" E S.E. = N.C.	PC = 47+25.00 X = 668477.90 Y = 173196.62 PI= 48+12.15 X = 668559.99 Y = 173167.37 PT = 48+97.72 X = 668647.13 Y = 173166.21 R = 525.00 DELTA = 18°50'59" LT D = 10°54'48" L = 172.72 T = 87.15 BK = S 70°23'15" E AH = S 89°14'14" E S.E. = N.C.	PC = 51+15.11 X = 668864.50 Y = 173163.32 PI= 52+82.38 X = 669031.76 Y = 173161.09 PT = 53+84.66 X = 669041.78 Y = 172994.12 R = 180.00 DELTA = 85°48'03" RT D = 31°49'52" L = 269.55 T = 167.27 BK = S 89°14'14" E AH = S 3°26'11" E S.E. = N.C.

INTERSECTIONS

- (A) STA 348+35.88 MEADOWBROOK RD =
STA 50+00.00 JOANNE DR/LANCASTER DR
- (B) STA 363+57.53 MEADOWBROOK RD =
STA 50+00.00 WOODRIDGE LN
- (C) STA 369+60.93 MEADOWBROOK RD =
STA 50+00.00 ROLLING RIDGE DR
- (D) STA 55+88.71 LANCASTER DR =
STA 60+00.00 EVANSDALE DR





RONALD & PATRICIA SENNOTT

CITY OF WAUKESHA WATER UTILITY

MATCH LINE STA 344+00

BEGIN PROJECT
STA 342+31.74

CITY OF WAUKESHA

BENCH MARKS				BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.	NO.	STATION	DESCRIPTION	ELEV.
710	337+98.48 LT	RAILROAD SPIKE SET IN EAST FACE OF 194 SIGN SOUTH OF NORTHVIEW RD; WEST SIDE OF CTH TT	982.99	709	343+67.82 LT	CHISEL X ON SW TOP OF 1st HYDRANT NORTH OF NORTHVIEW RD. ON WEST SIDE OF CTH TT	994.71

CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS

MEADOWBROOK RD
PLAN

APPROVED: _____ DATE: _____
APPROVED: _____ DATE: _____

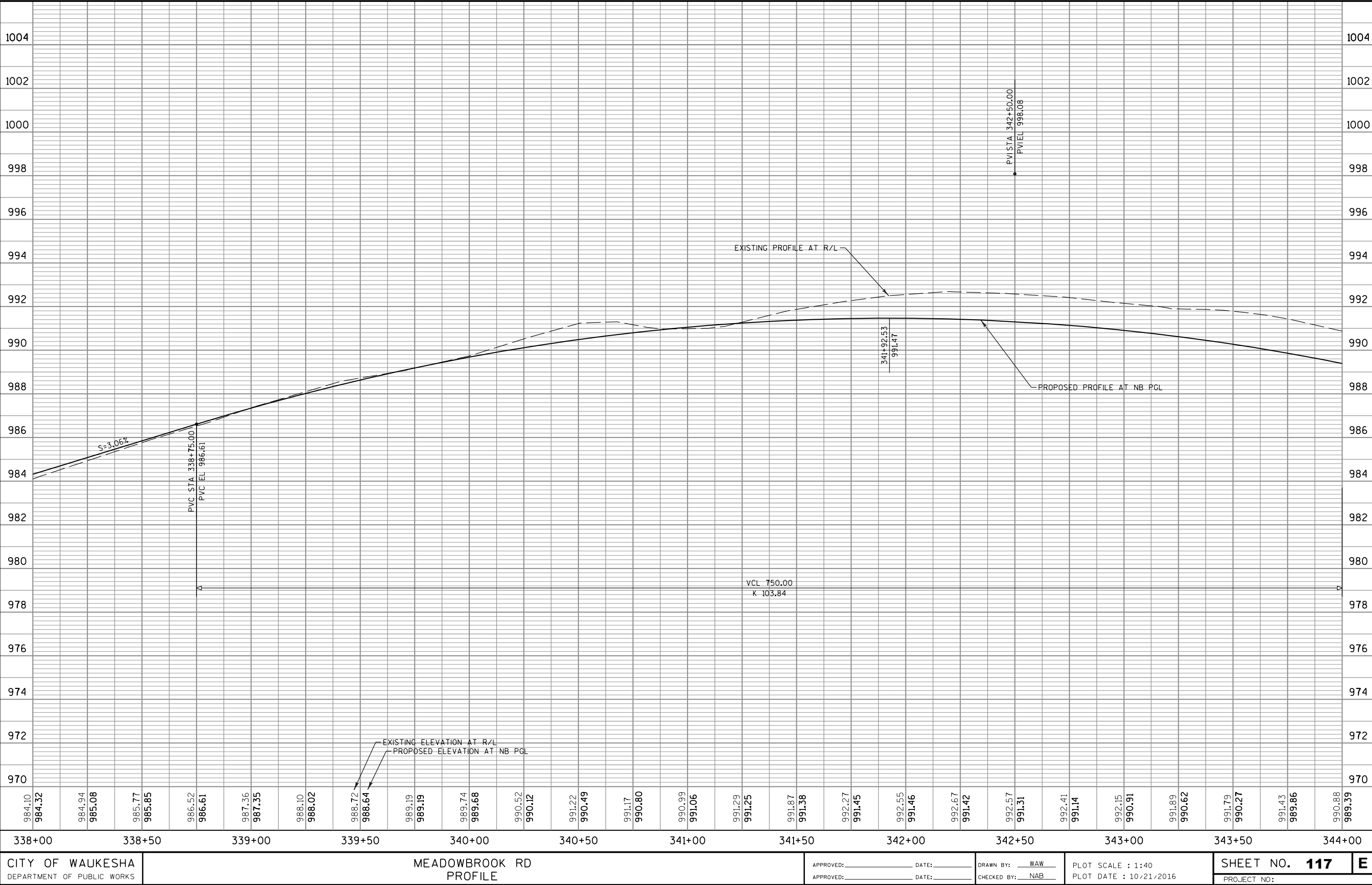
DRAWN BY: WAW
CHECKED BY: NAB

PLOT SCALE : 1:40
PLOT DATE : 10/21/2016

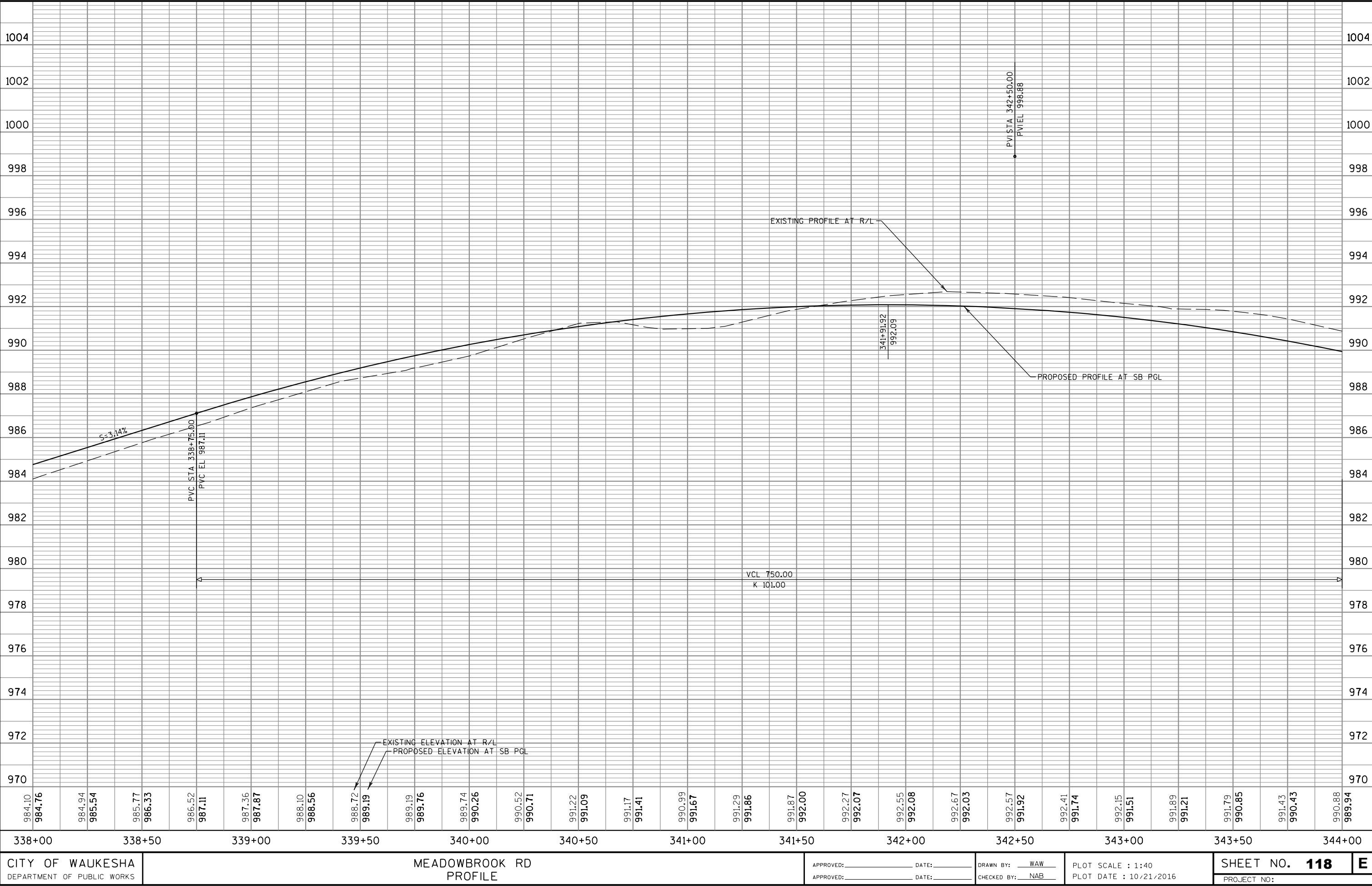
SHEET NO. 116
PROJECT NO:

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CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS

MEADOWBROOK RD
PROFILE

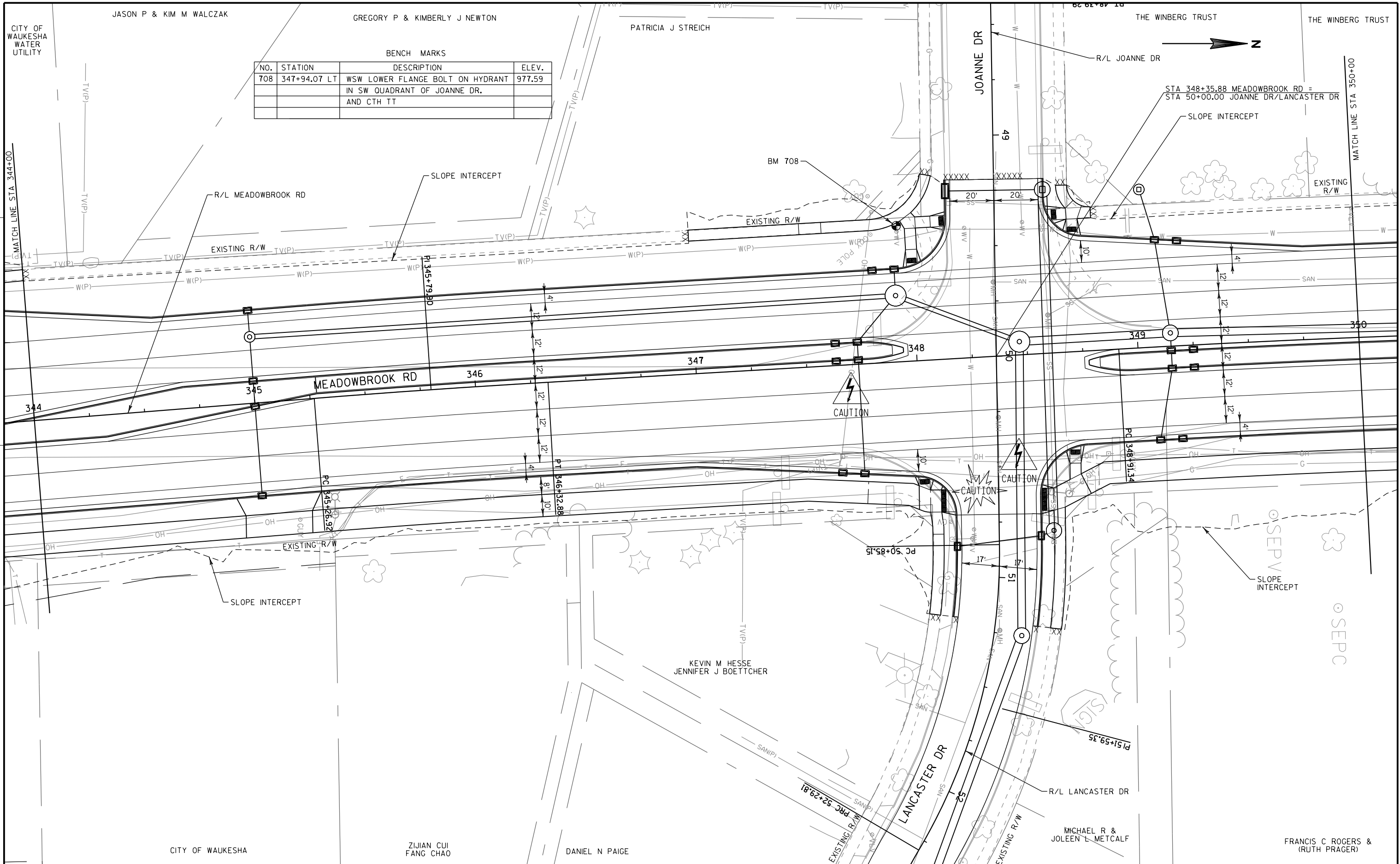
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APPROVED: _____ DATE: _____

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PLOT SCALE : 1:40
PLOT DATE : 10/21/2016

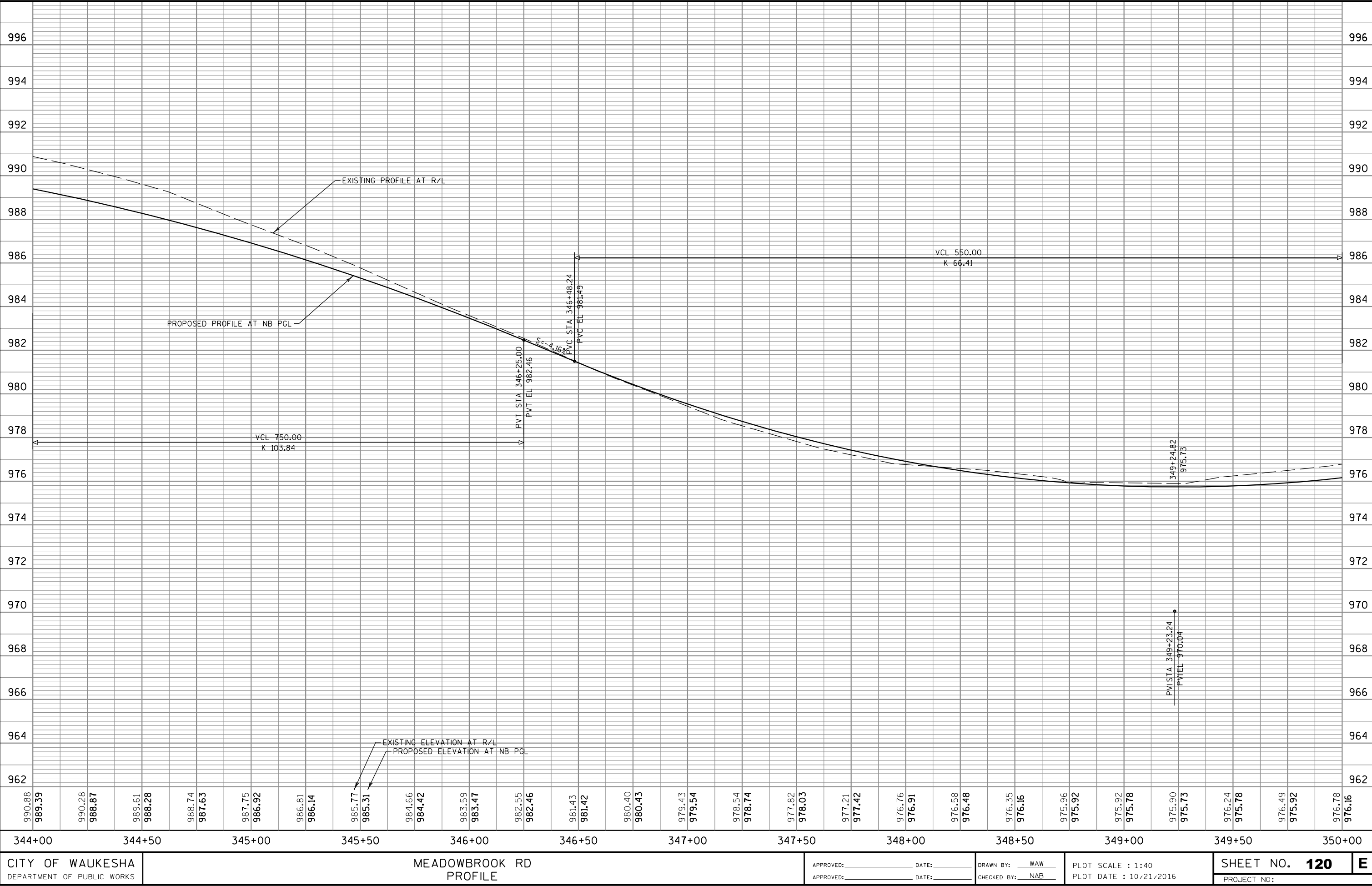
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PROJECT NO:

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BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
708	347+94.07 LT	WSW LOWER FLANGE BOLT ON HYDRANT IN SW QUADRANT OF JOANNE DR. AND CTH TT	977.59

FILE NAME : S:\Waukesha\City\Gov\150253 Waukesha Bypass\VDGN\Plansheets\050102_PP.dgn



CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS

MEADOWBROOK RD
PROFILE

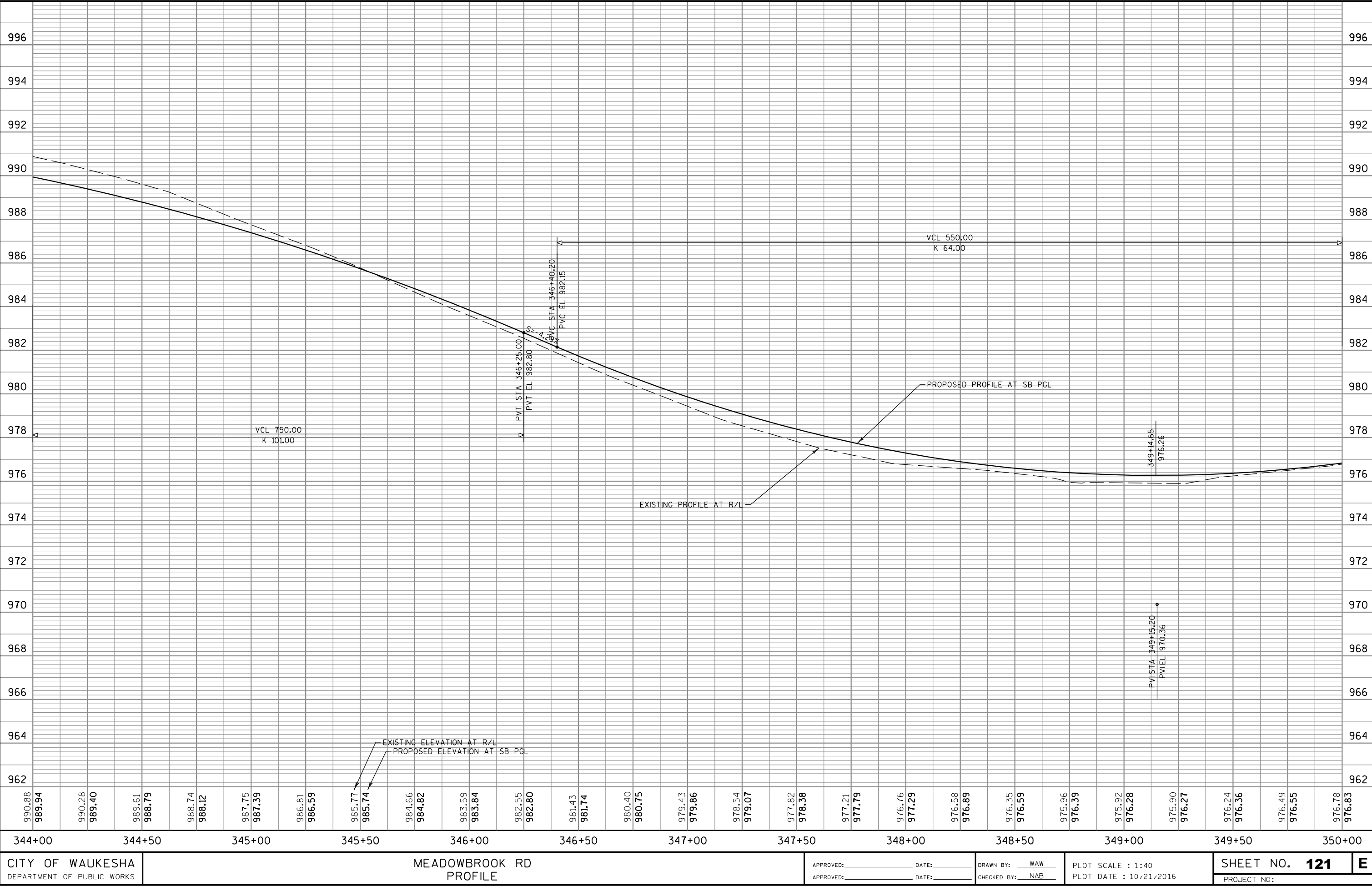
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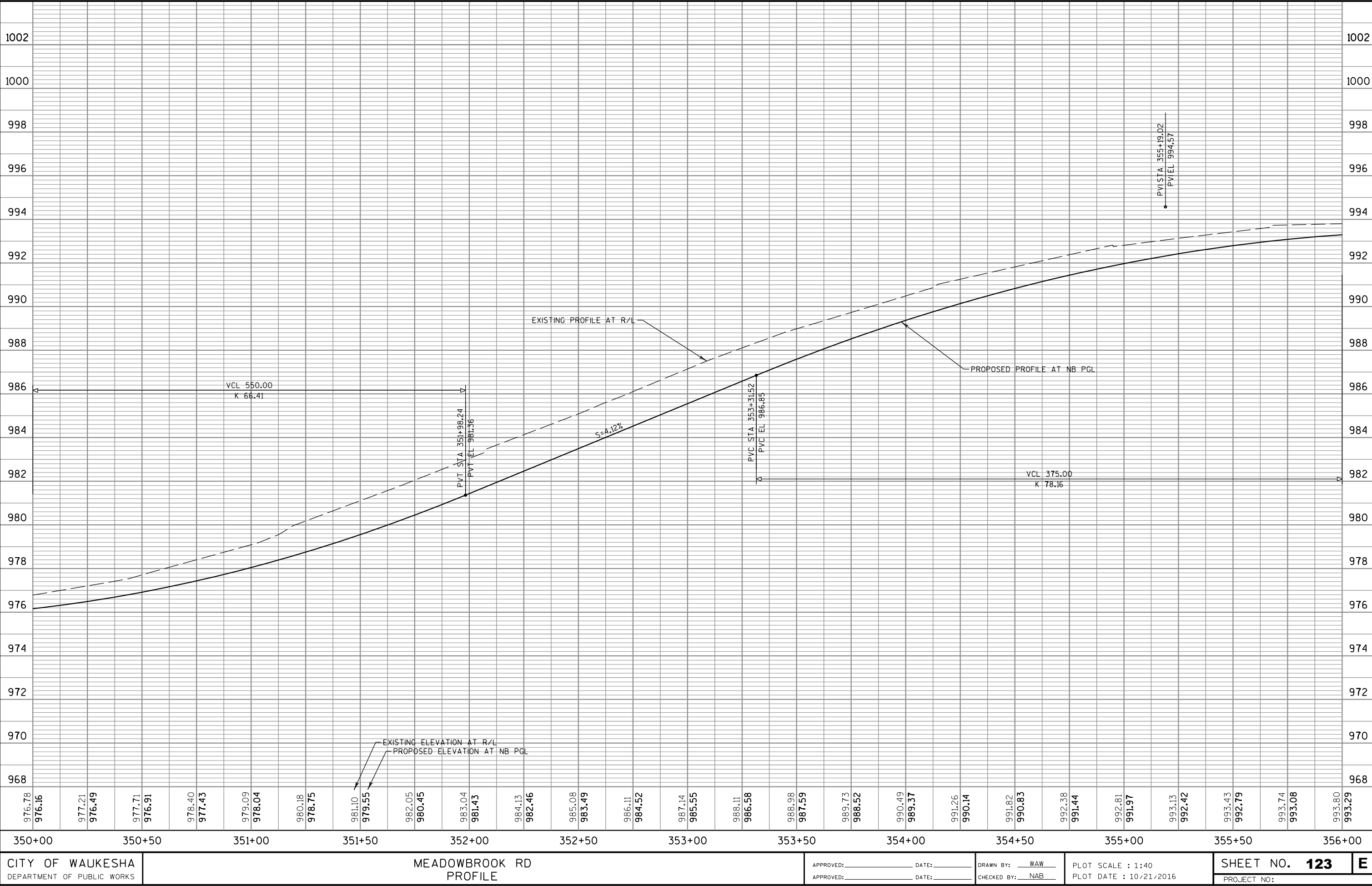
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PLOT DATE : 10/21/2016

SHEET NO. **120** **E**
PROJECT NO:

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CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS

MEADOWBROOK RD
PROFILE

APPROVED: _____ DATE: _____
APPROVED: _____ DATE: _____

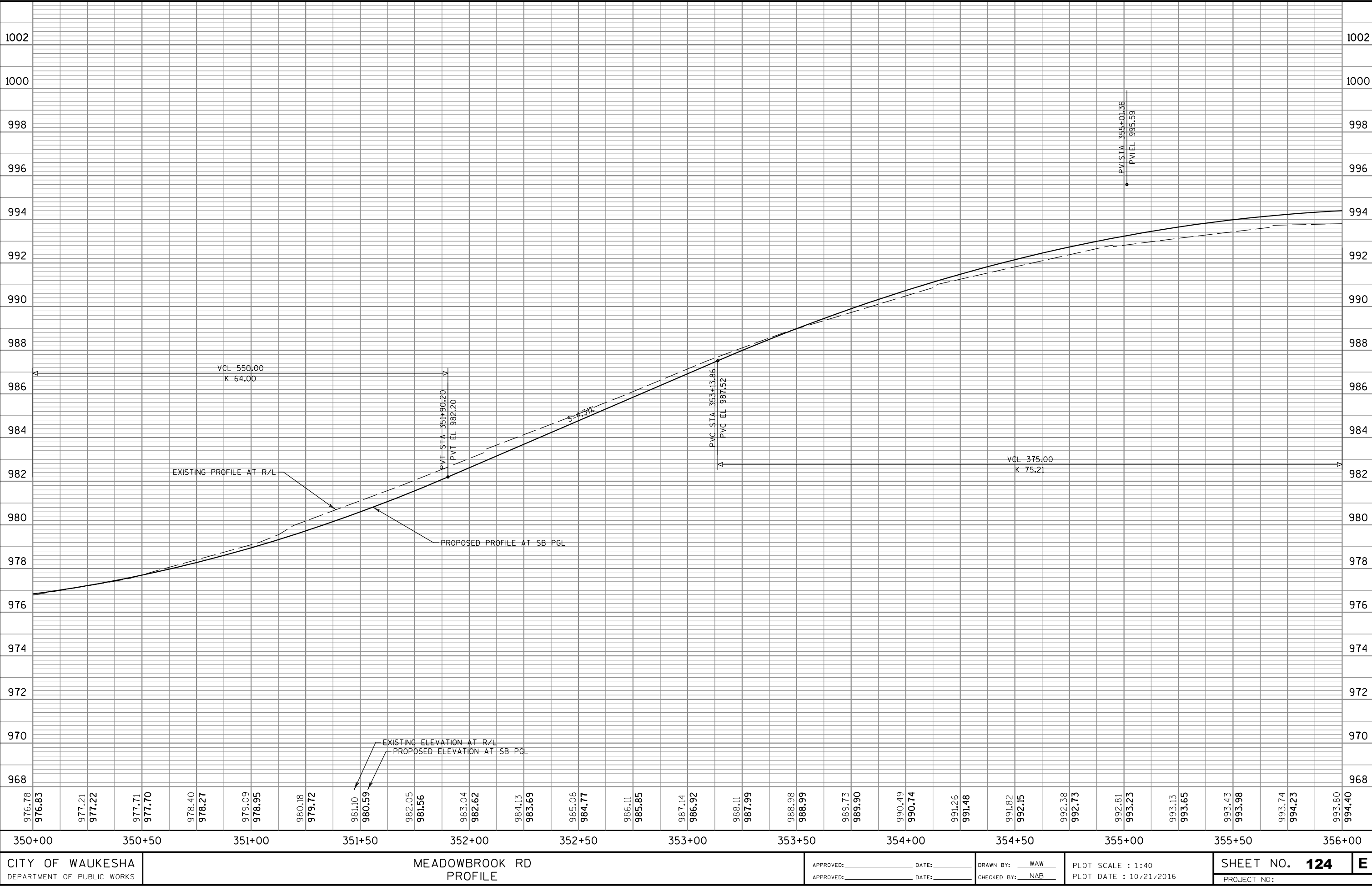
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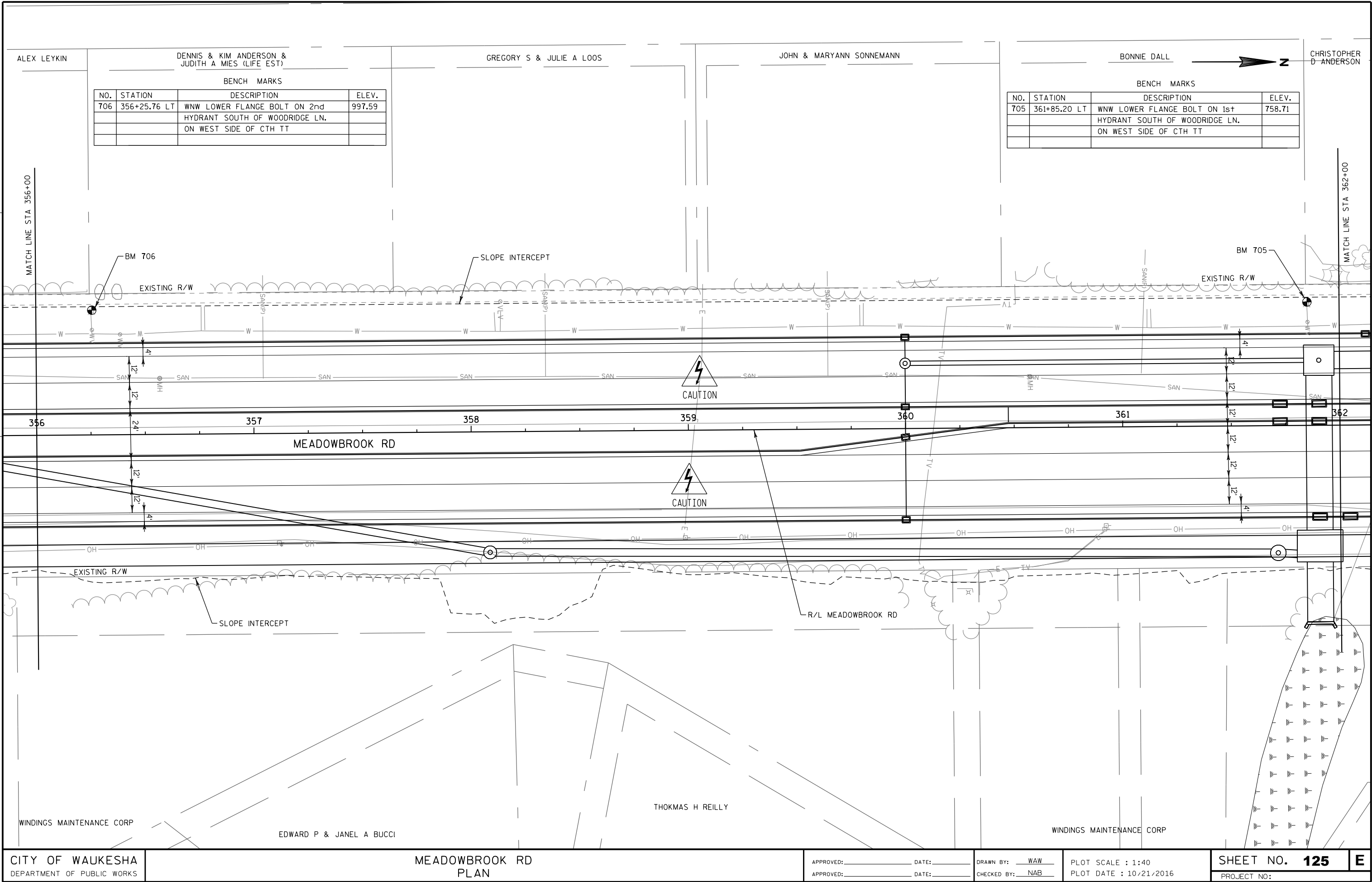
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BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
706	356+25.76 LT	WNW LOWER FLANGE BOLT ON 2nd	997.59
		HYDRANT SOUTH OF WOODRIDGE LN.	
		ON WEST SIDE OF CTH TT	

BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
705	361+85.20 LT	WNW LOWER FLANGE BOLT ON 1st	758.71
		HYDRANT SOUTH OF WOODRIDGE LN.	
		ON WEST SIDE OF CTH TT	

CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS

MEADOWBROOK RD
PLAN

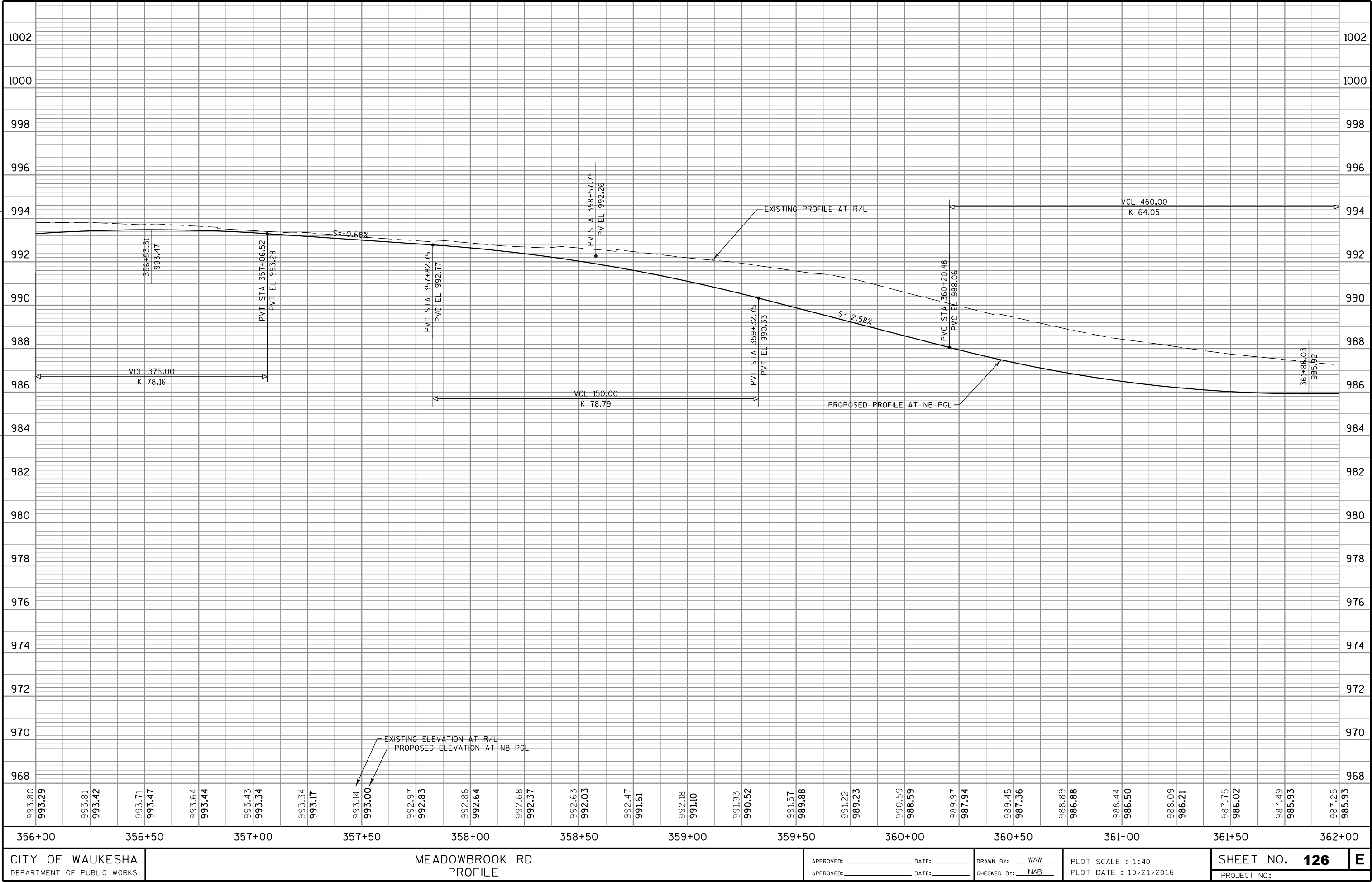
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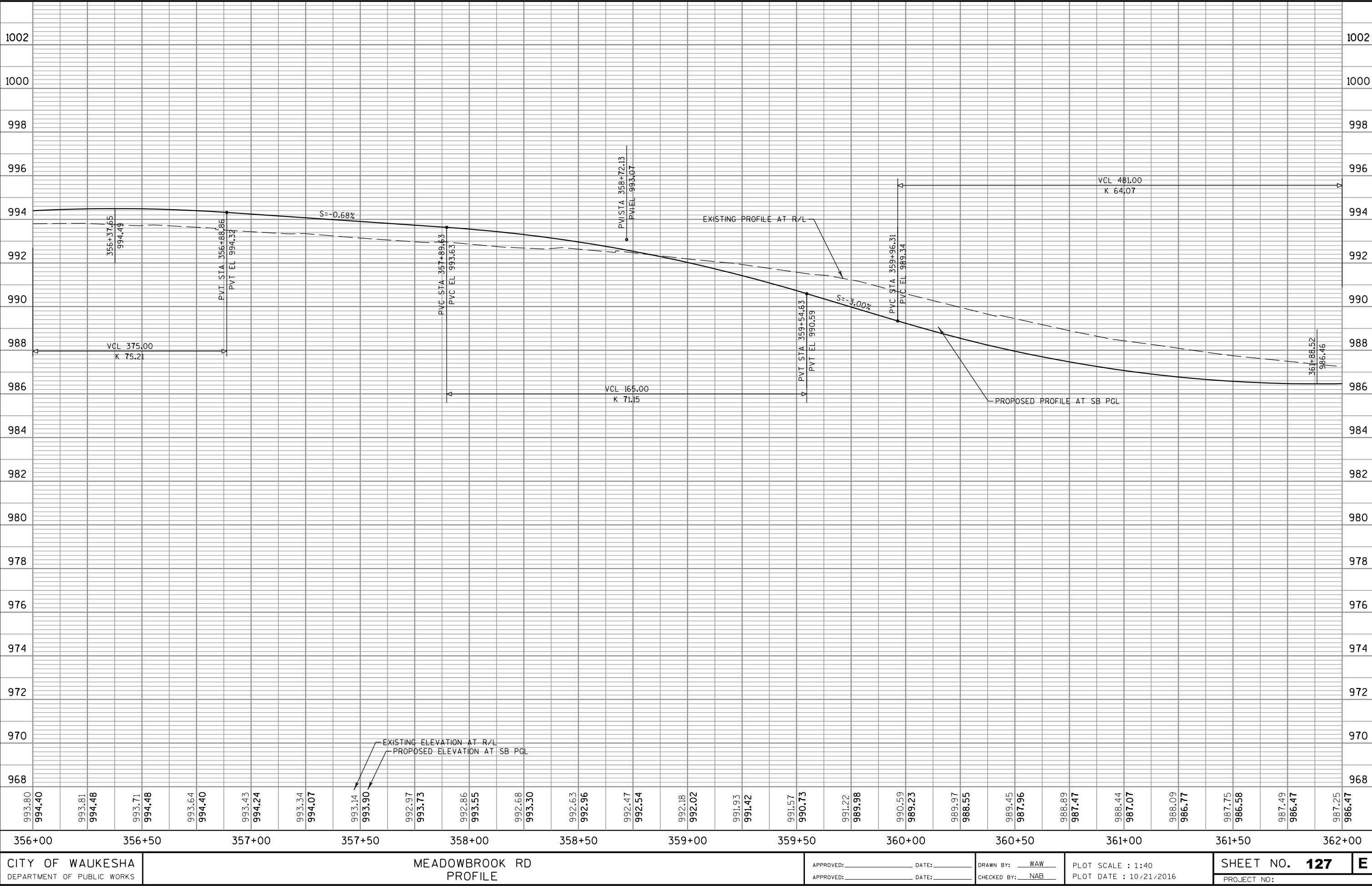
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BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
704	366+03.85 LT	NW LOWER FLANGE BOLT ON 1st	999.82
		HYDRANT NORTH OF ROLLING RIDGE RD.	
		& WOODRIDGE LN ON WEST SIDE	
		OF CTH TT	

BENCH MARKS

RYAN & JAIME ANDERSON

CHRISTOPHER
D ANDERSON

R/L WOODRIDGE LN

WOODRIDGE LN

EXISTING F

STA 363+57.53 MEADOWBROOK RD =
STA 50+00.00 WOODRIDGE LN

EXISTING R/W

BM 704

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95	0.0000	

EXISTING R/W

MEADOWBROOK RD

R/L MEADOWBROOK RD

— SLOPE INTERCEPT

WINDINGS MAINTENANCE CORP

JOSHUA G & JESSICA LAUFENBERG

ERIN M BABCOCK

WINDINGS MAINTENANCE CORP

CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS

MEADOWBROOK RD
PLAN

APPROVED: _____ DATE: _____

APPROVED: _____ DATE: _____

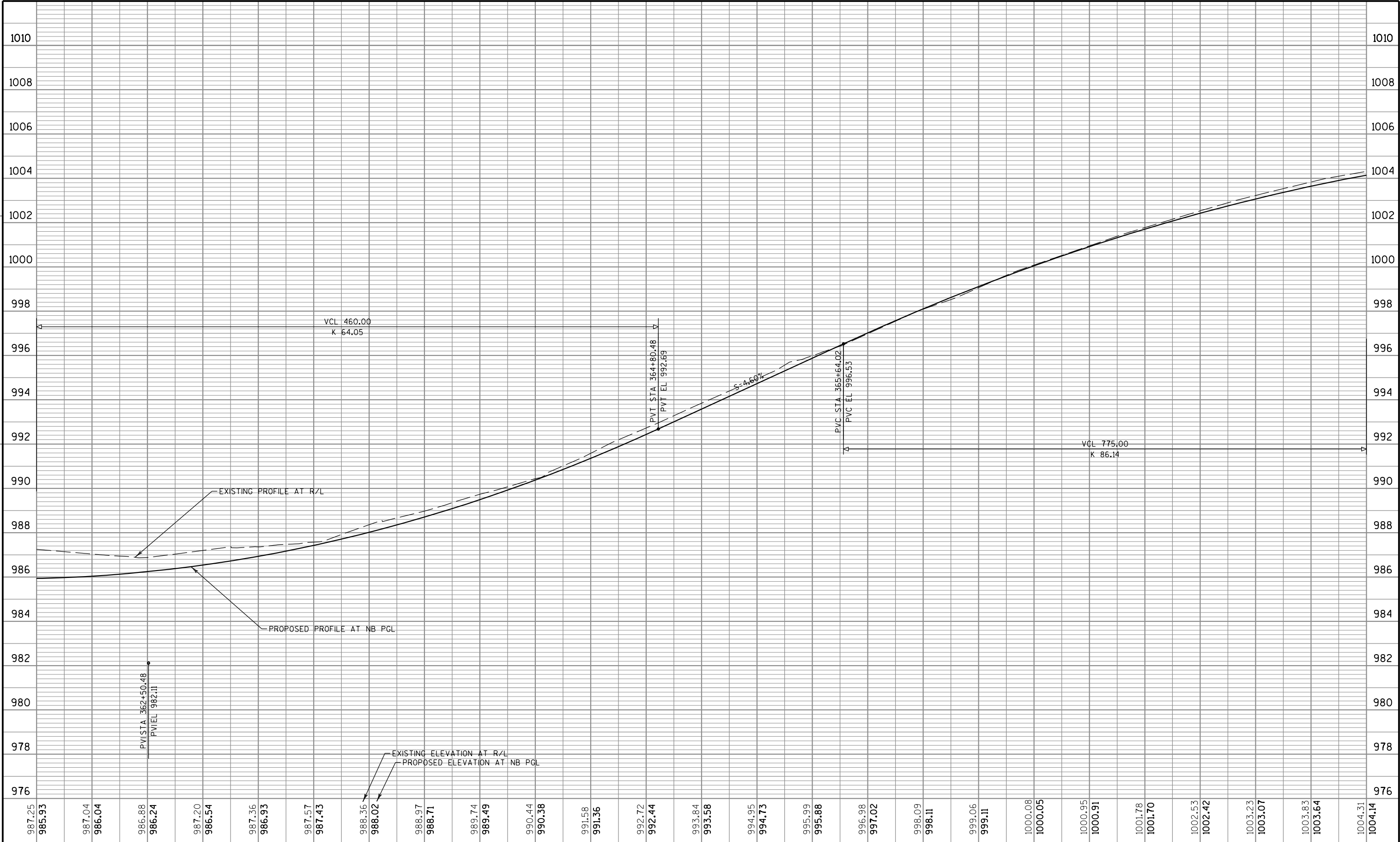
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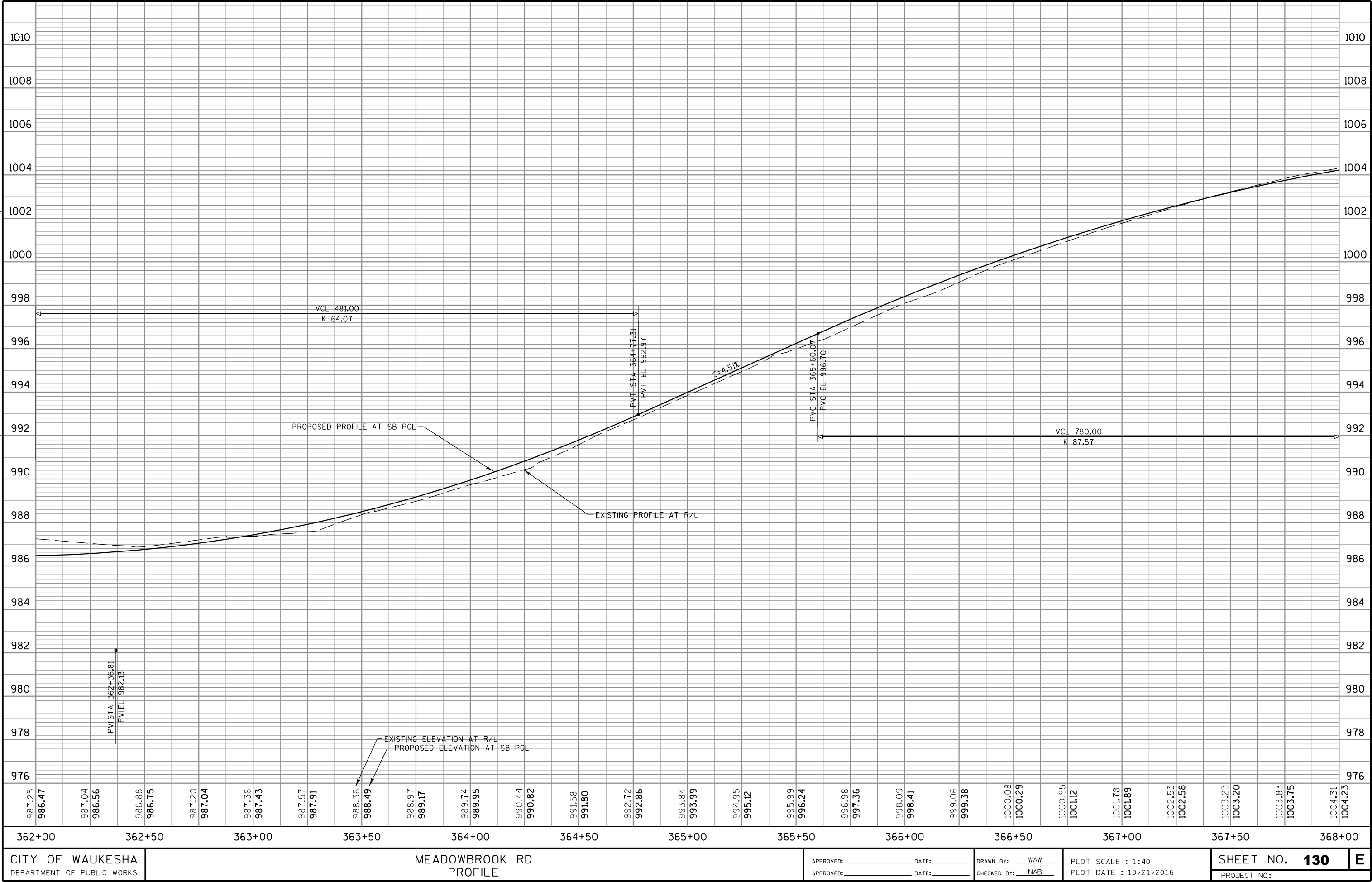
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PLOT DATE : 10/21/2016

SHEET NO. 128
PROJECT NO:

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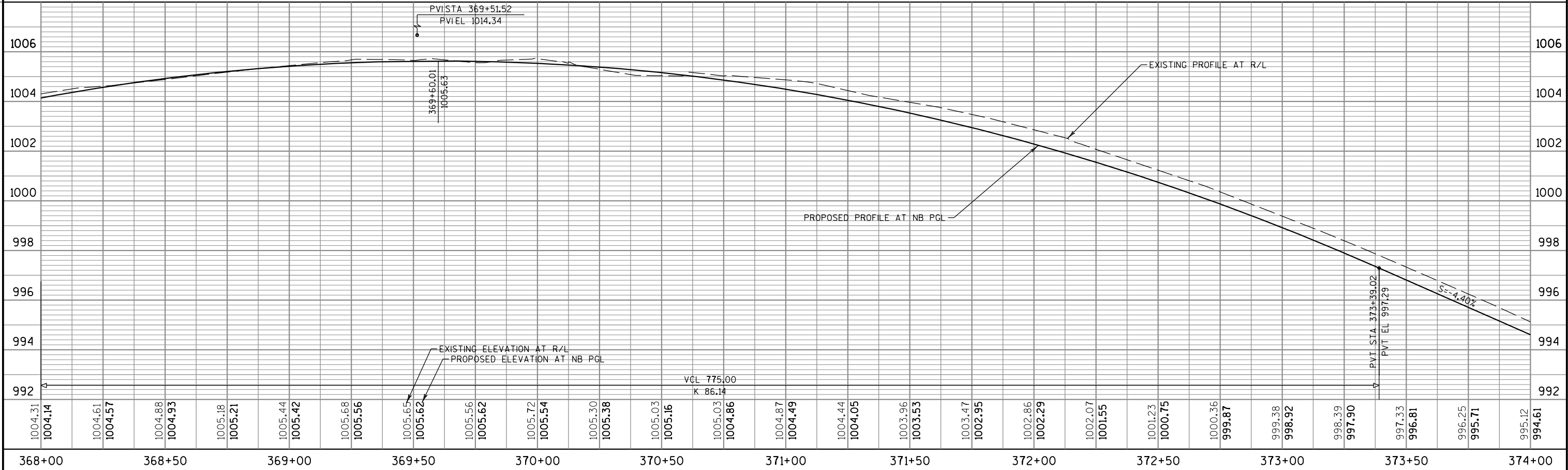
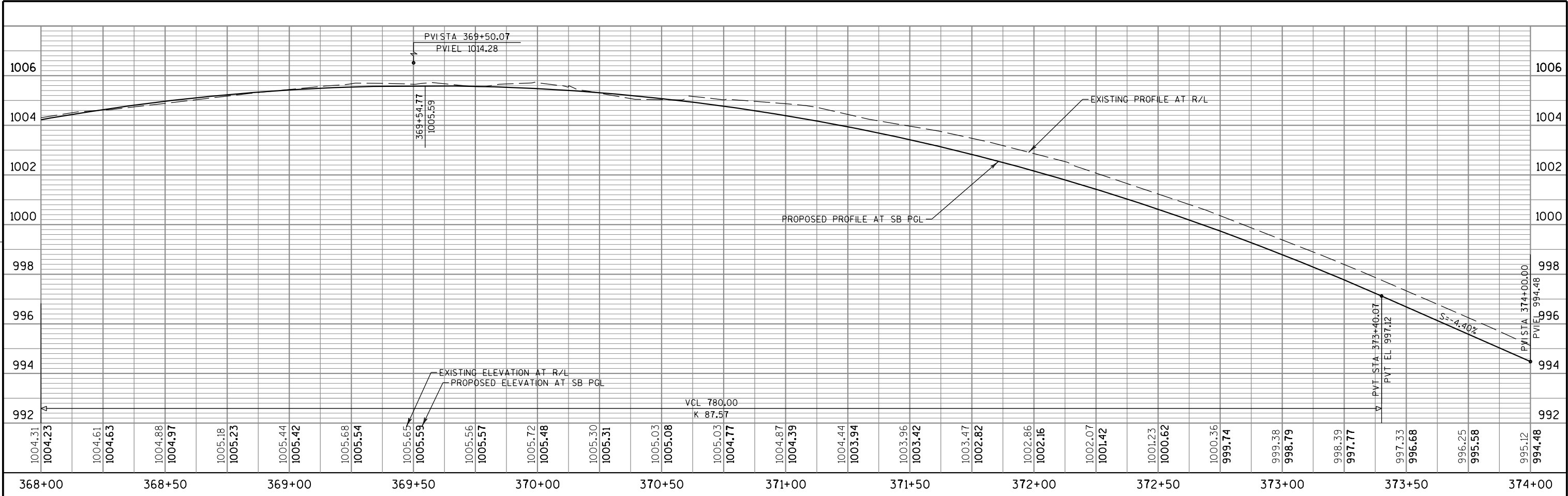


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CHRISTOPHER J PLANT



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CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS

MEADOWBROOK RD
PROFILE

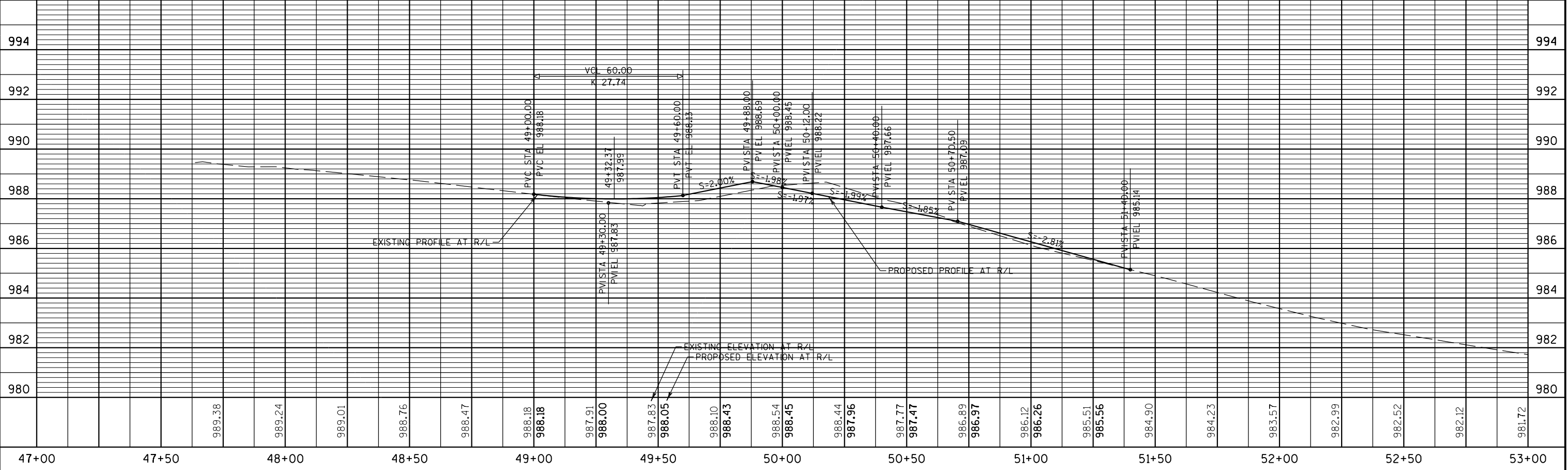
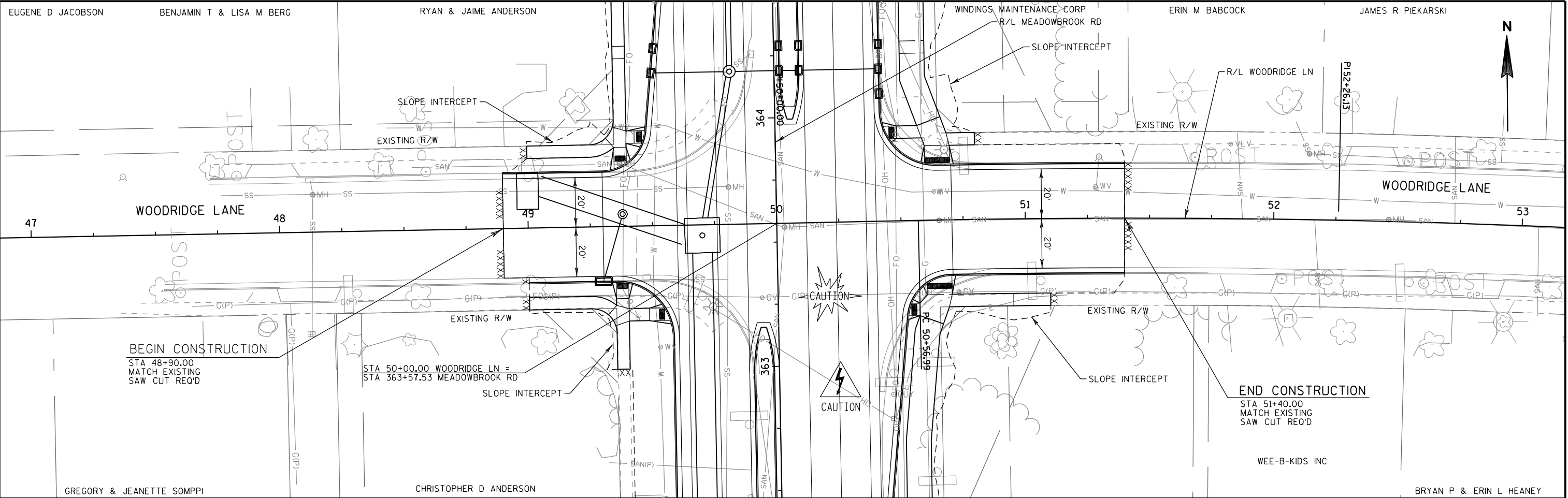
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DRAWN BY: WAW
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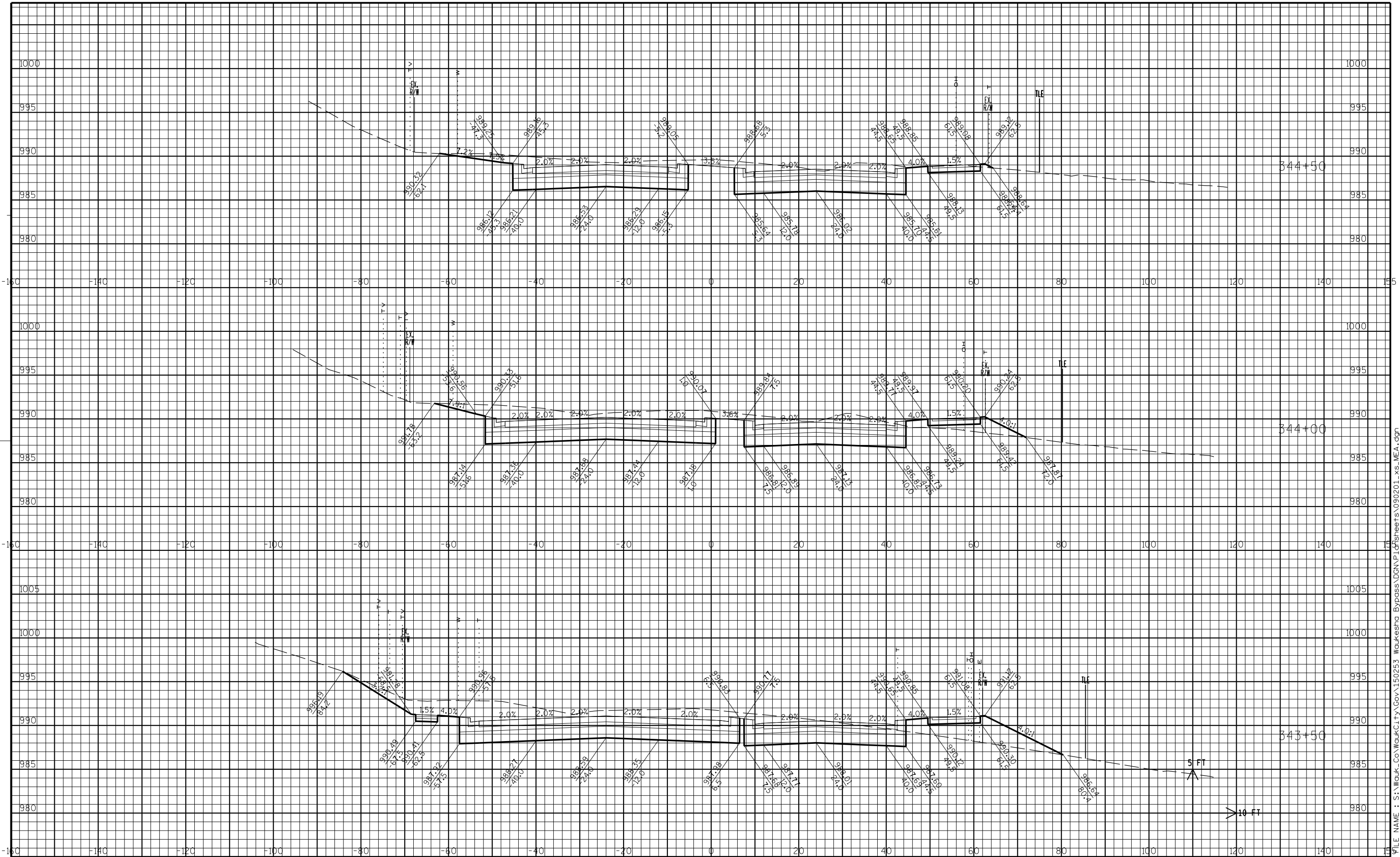
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PLOT DATE : 10/21/2016

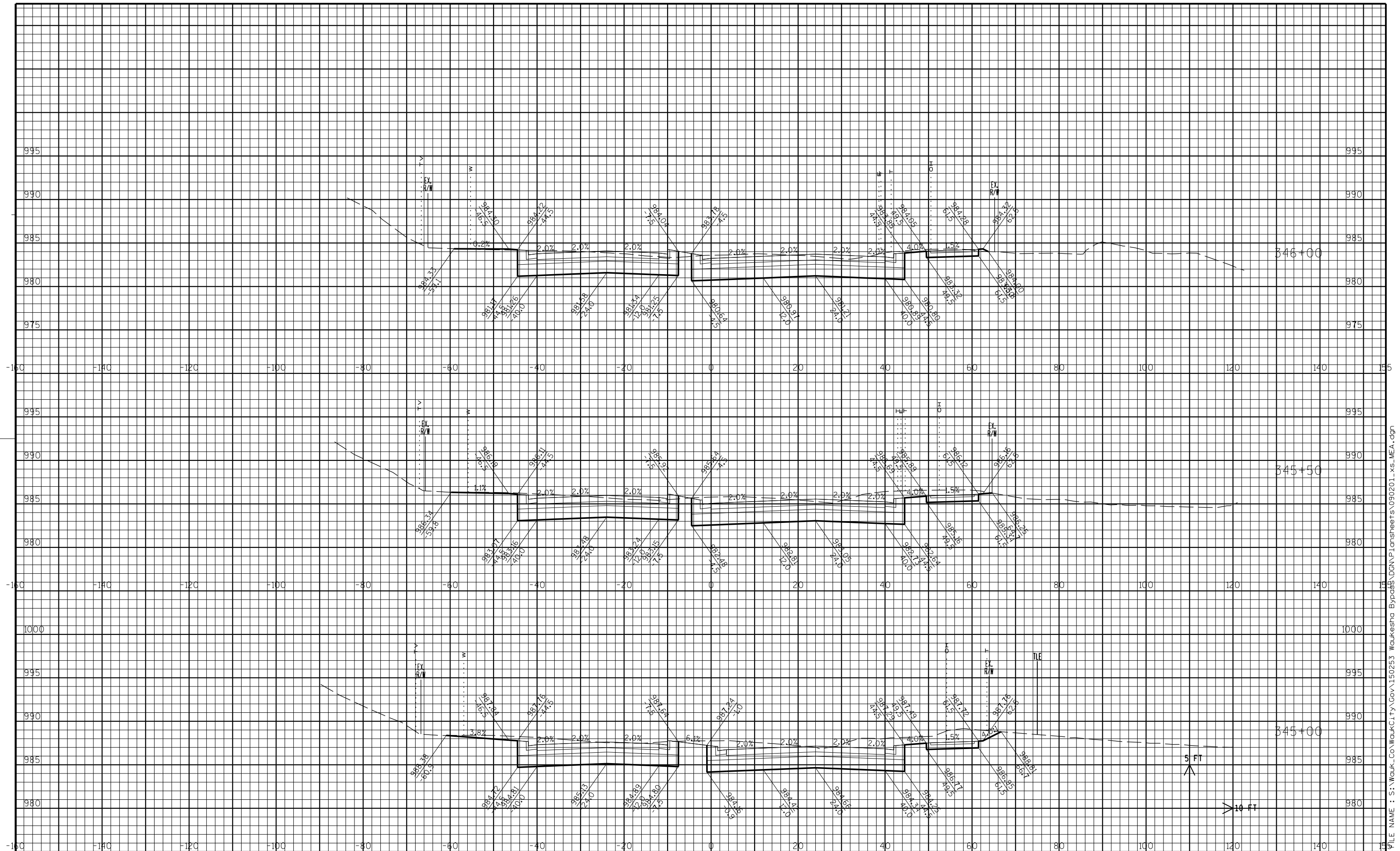
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CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS

MEADOWBROOK RD
CROSS SECTIONS

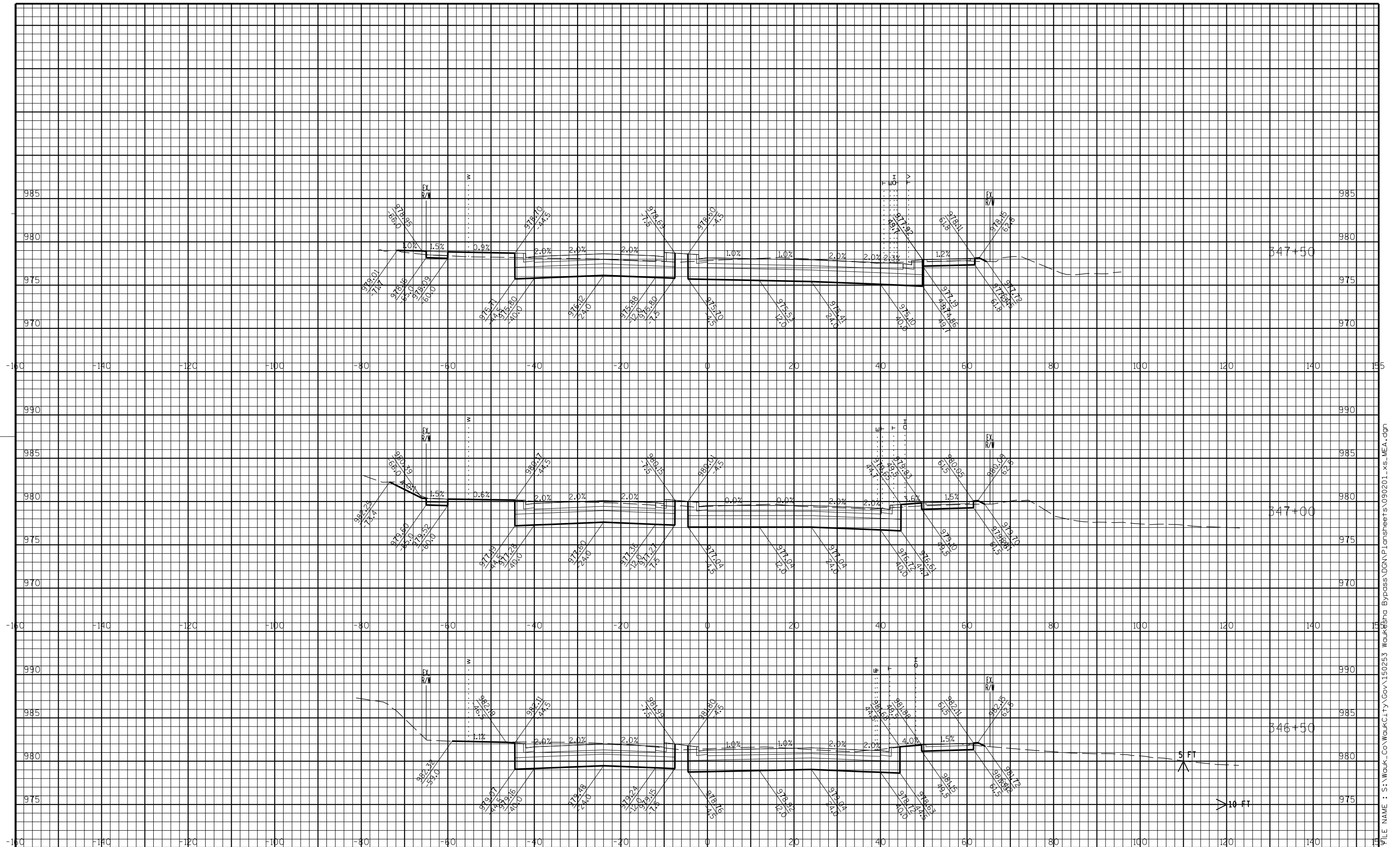
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PLOT SCALE : 1:20
PLOT DATE : 10/21/2016

SHEET NO. 137
PROJECT NO:

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CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS

MEADOWBROOK RD
CROSS SECTIONS

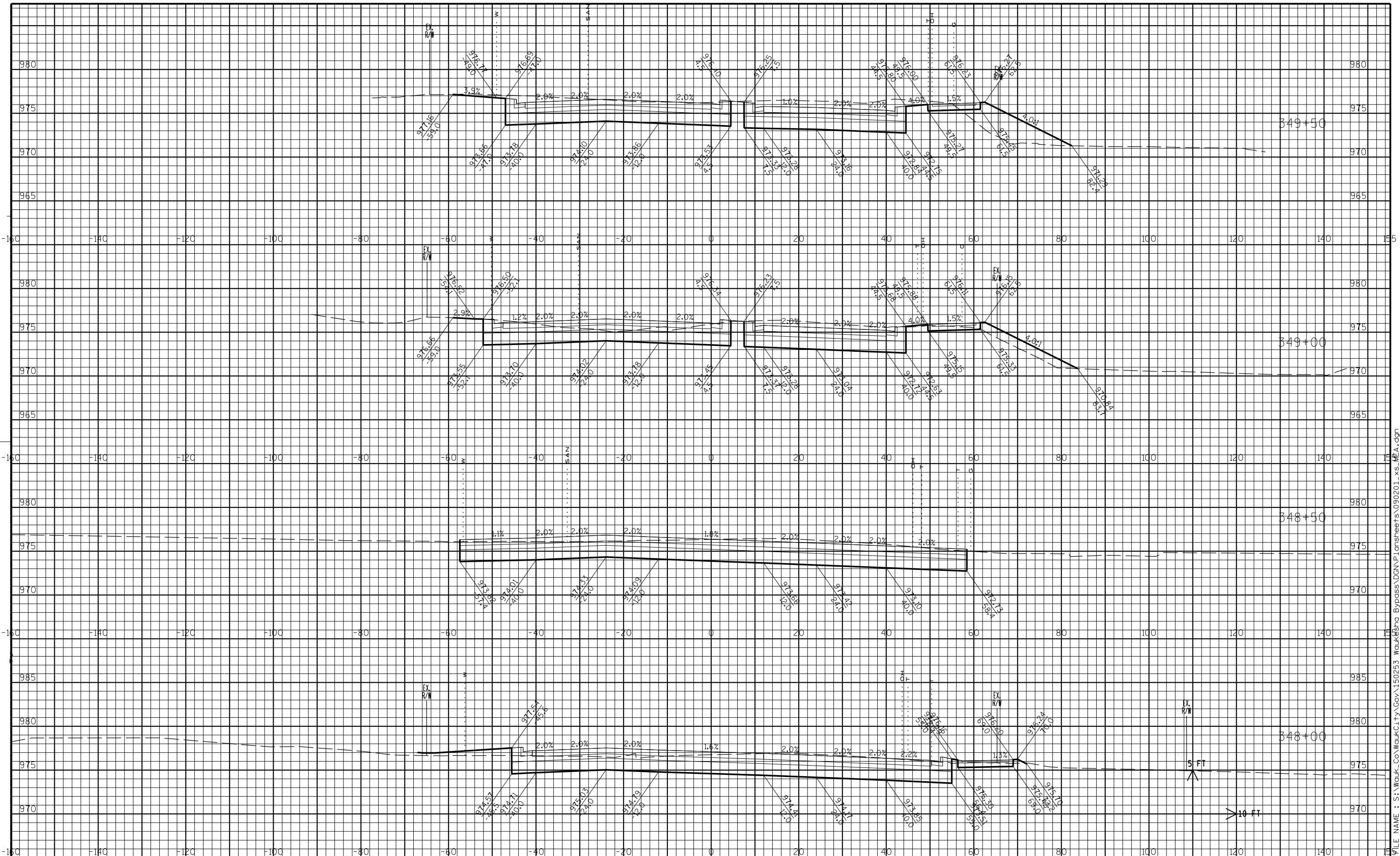
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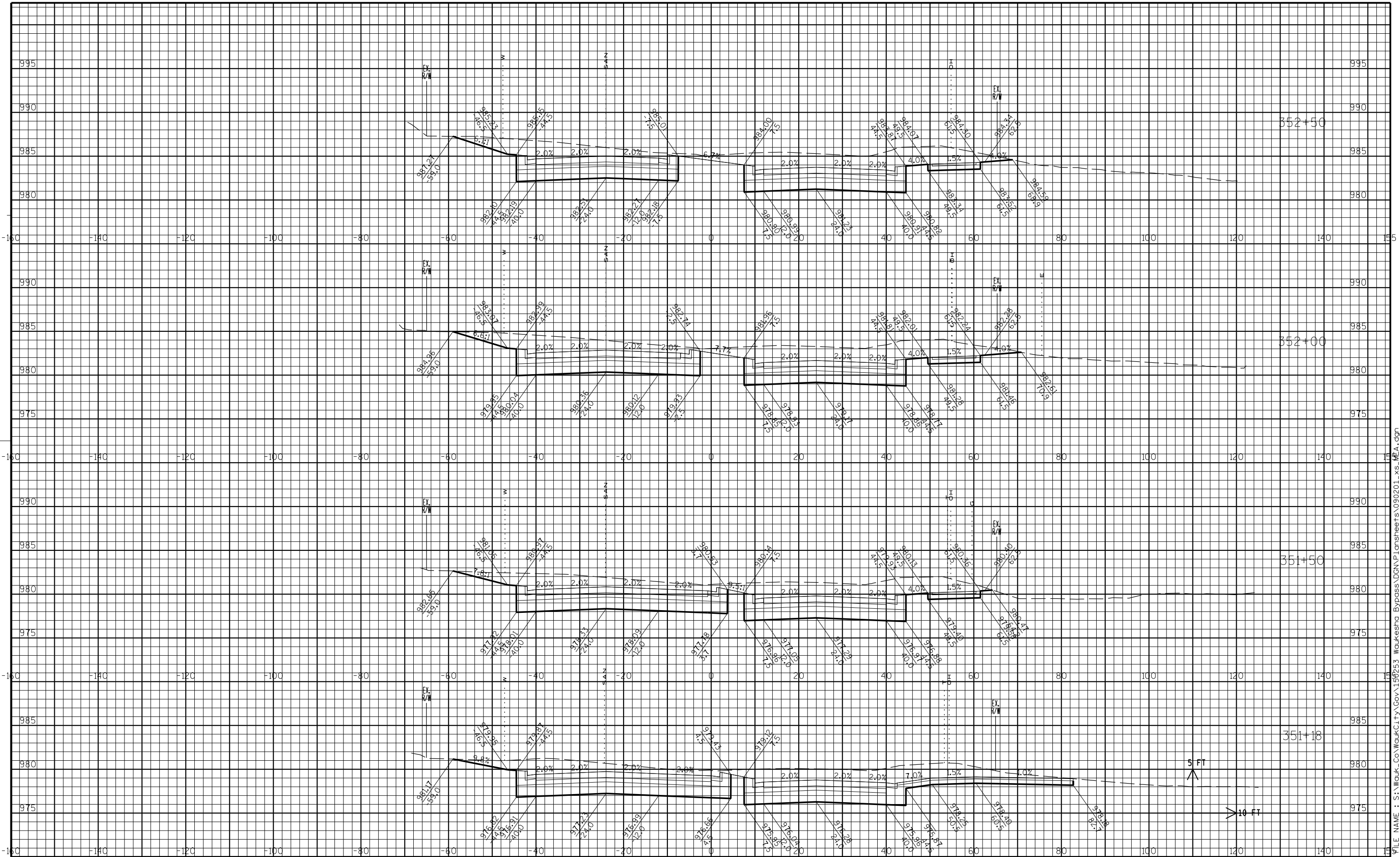
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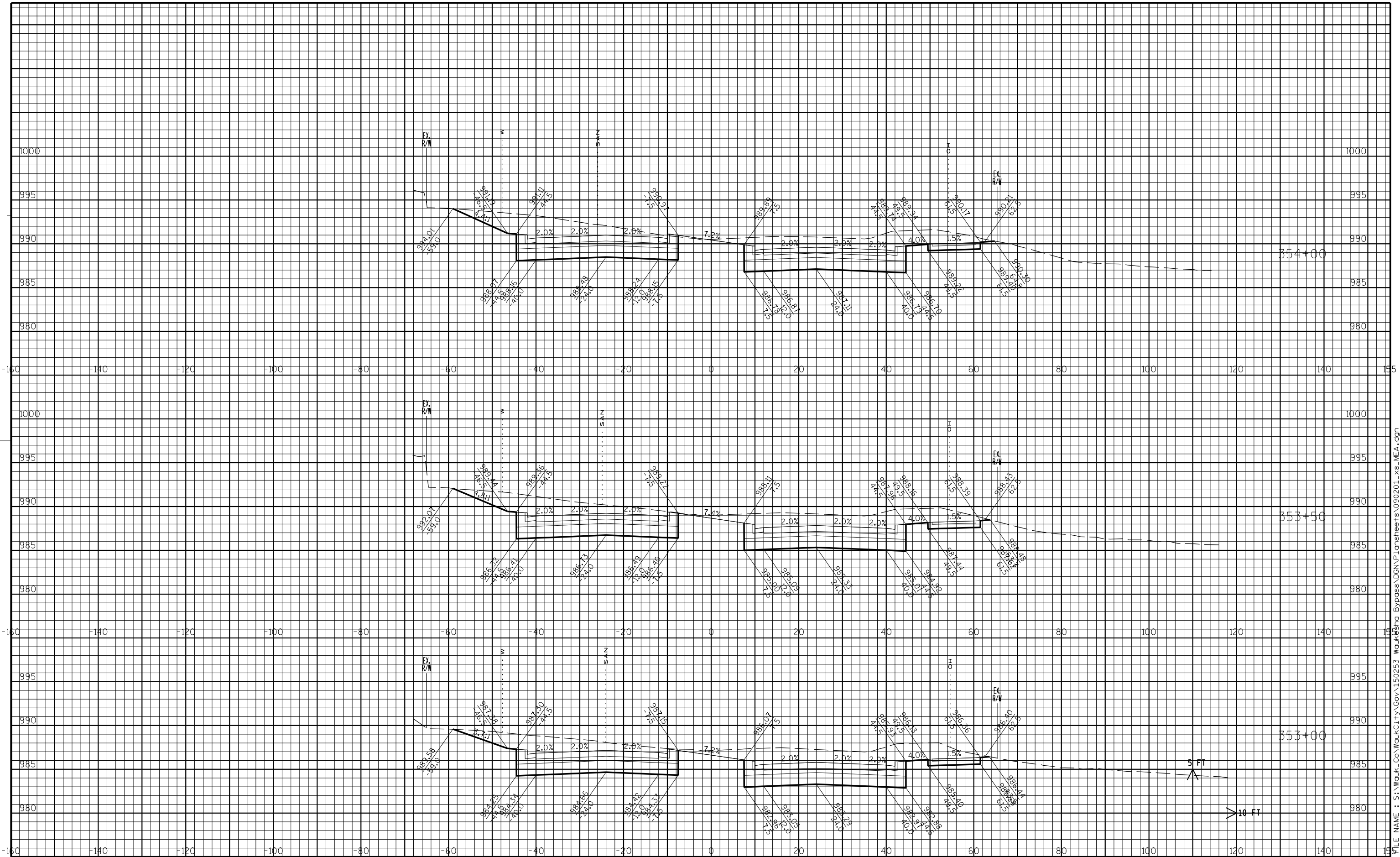
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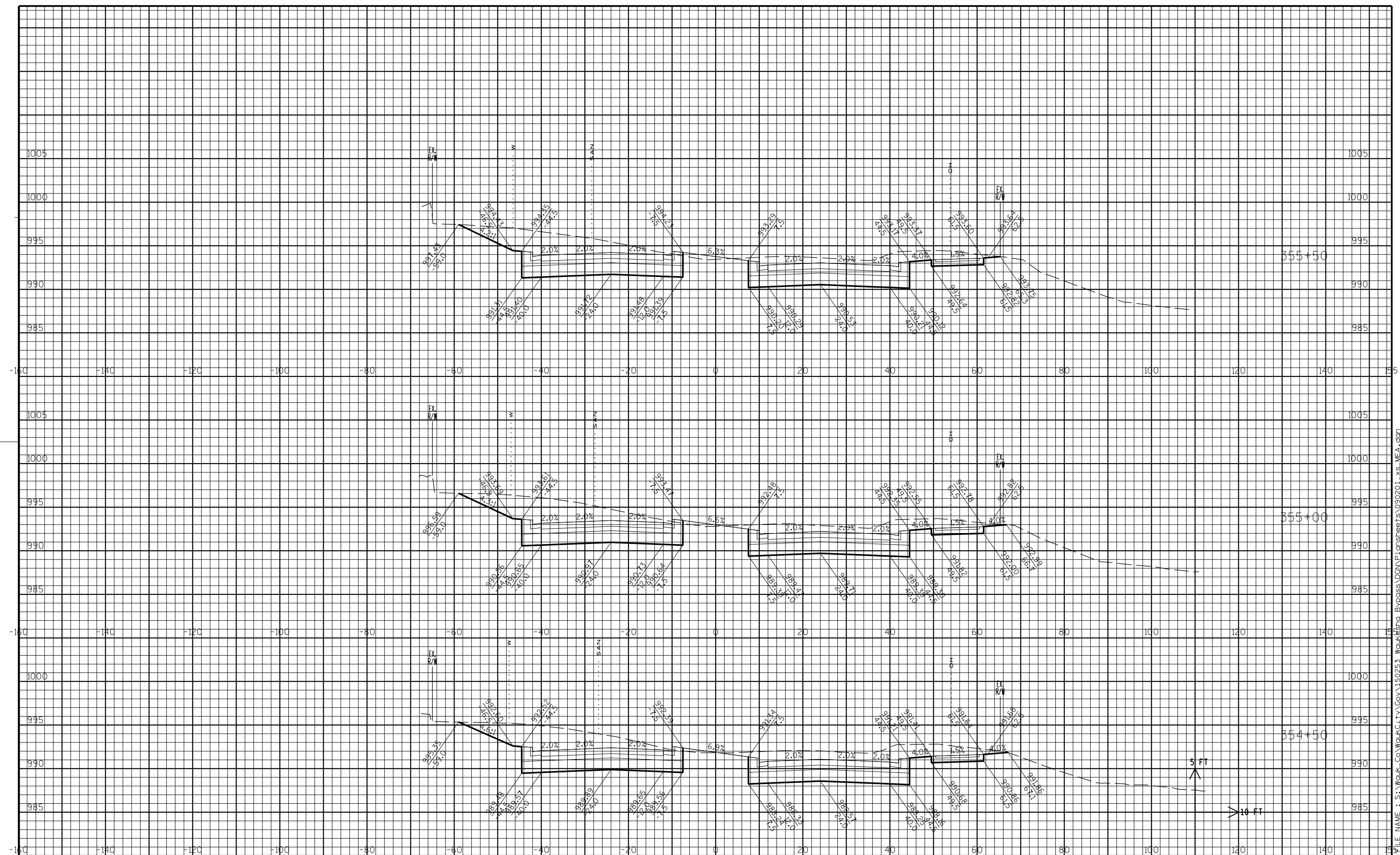
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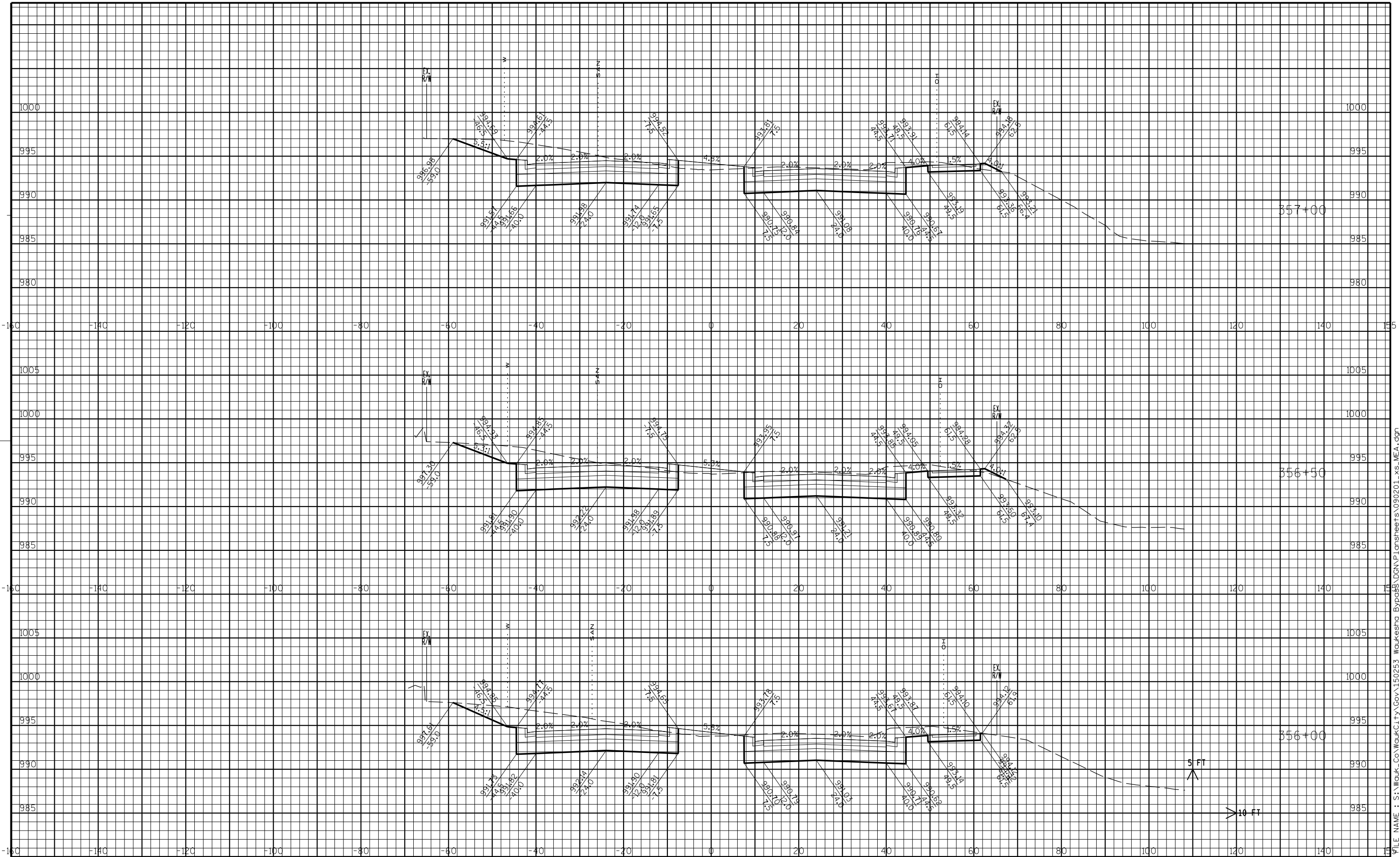
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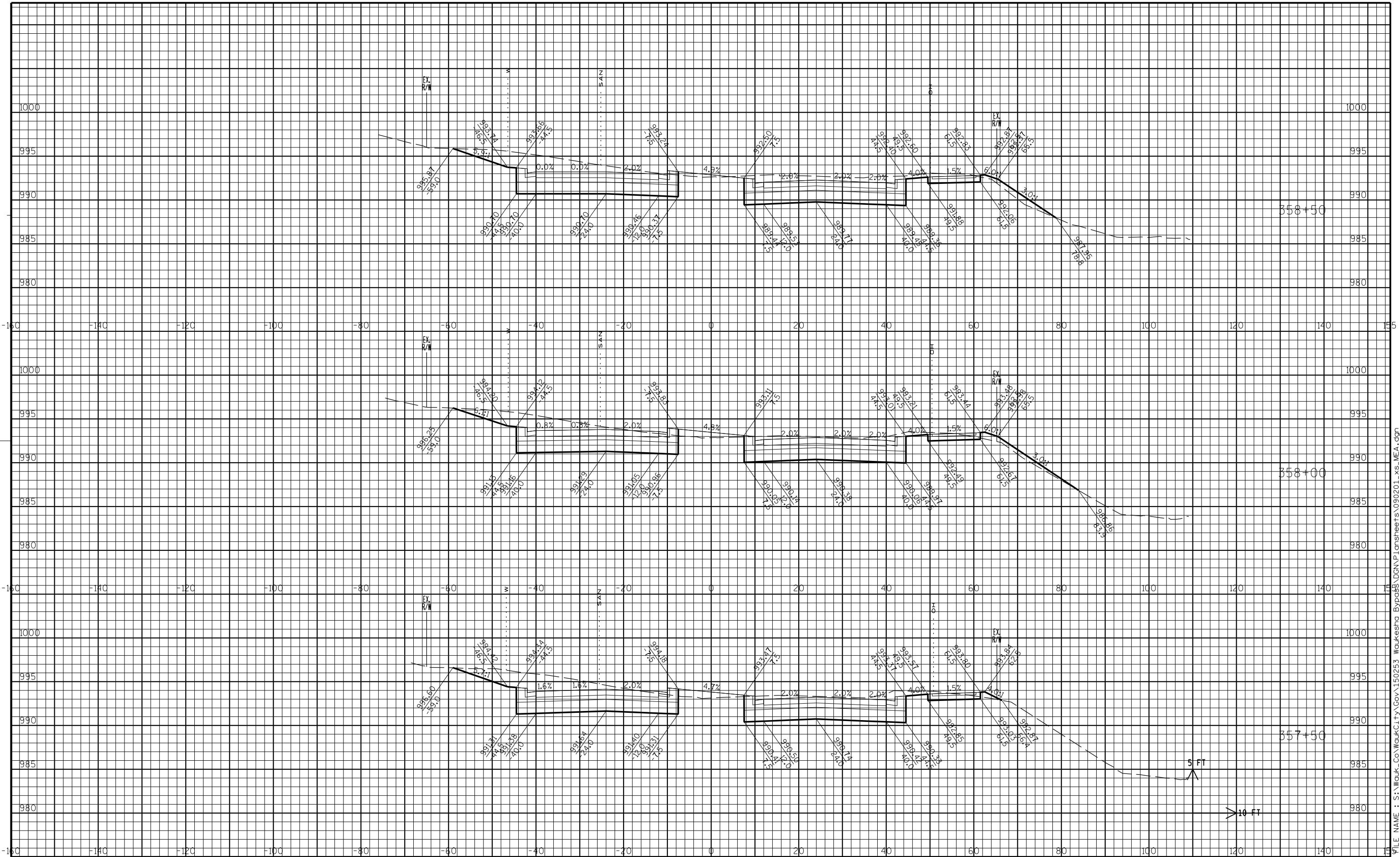
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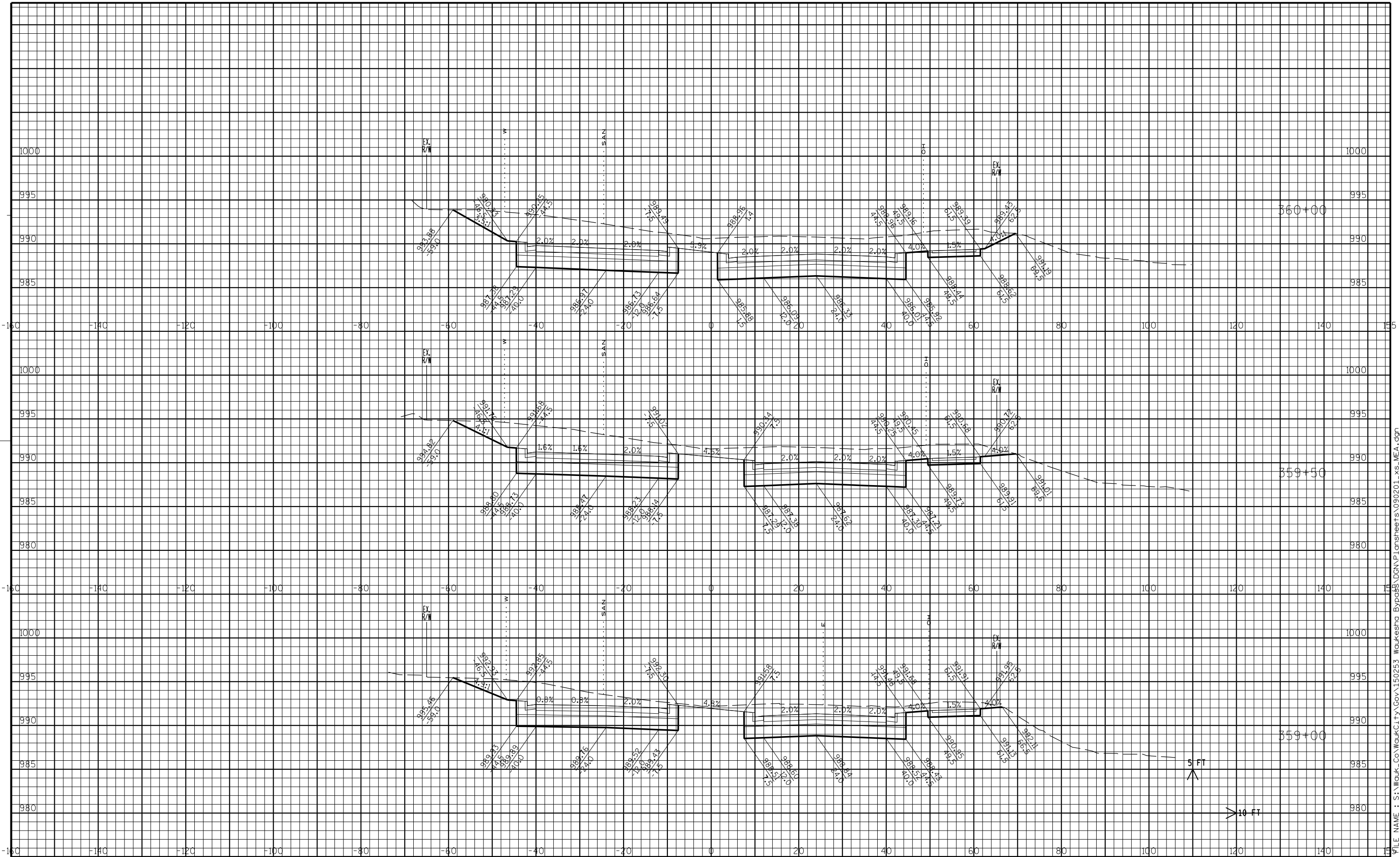


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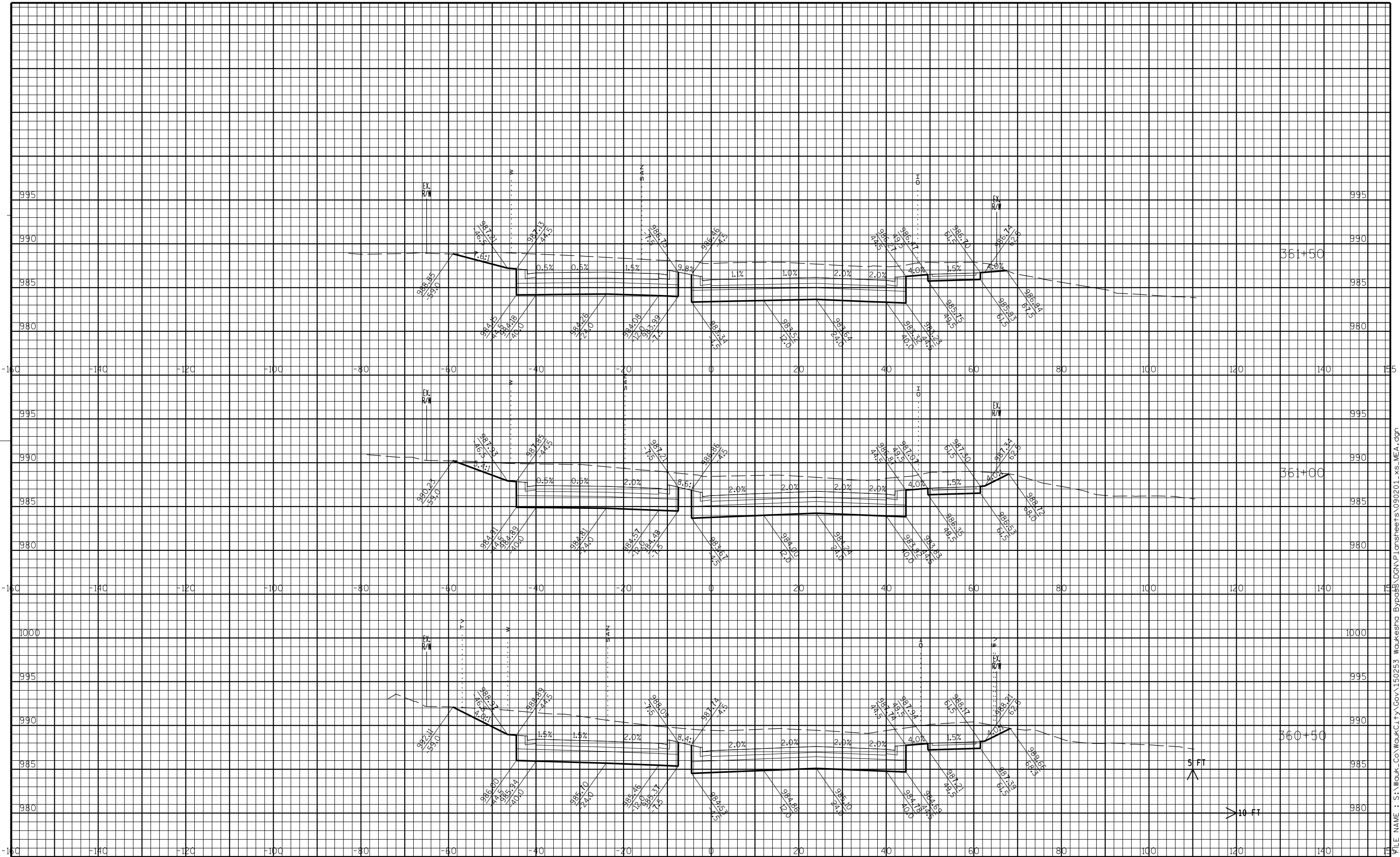


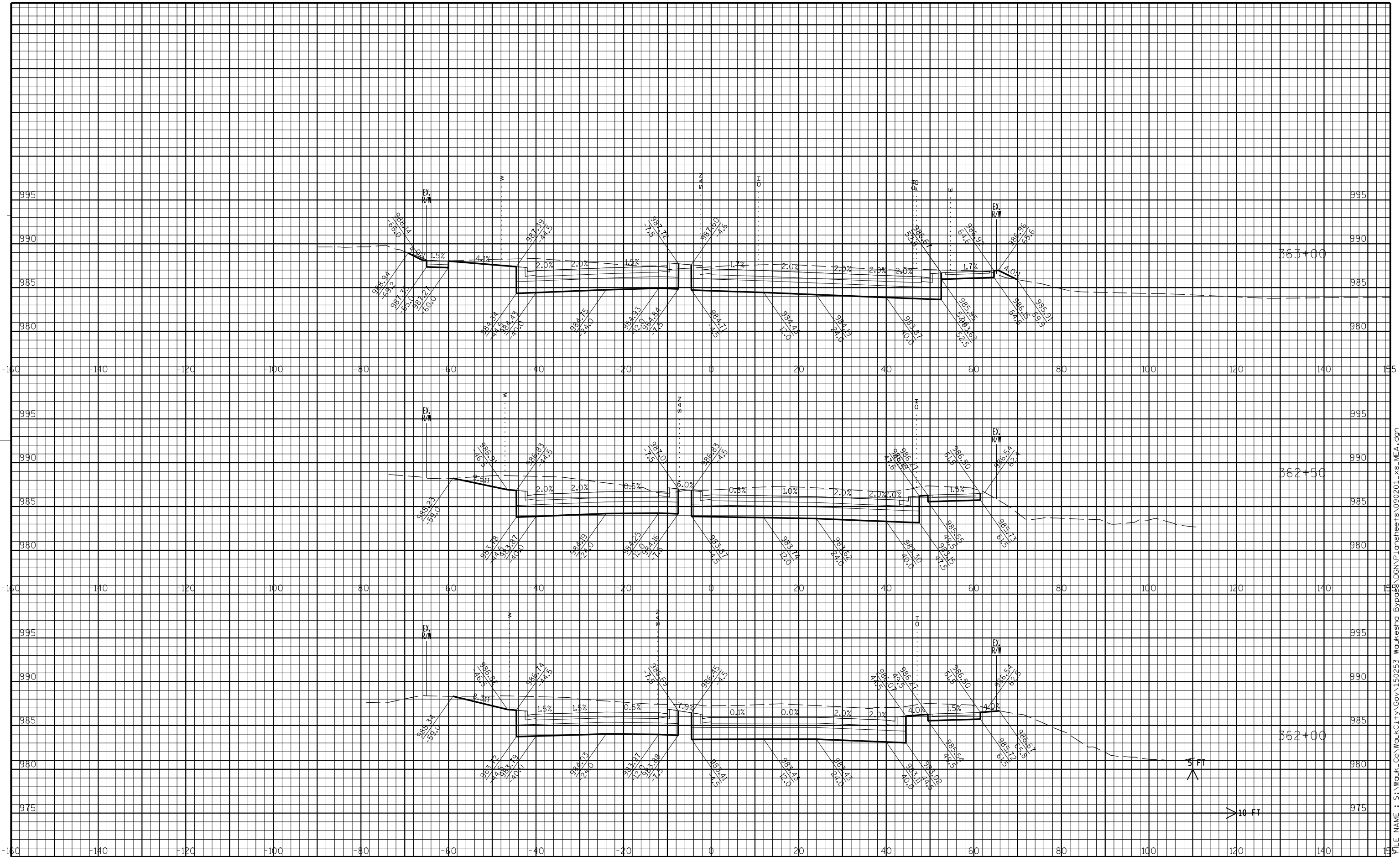
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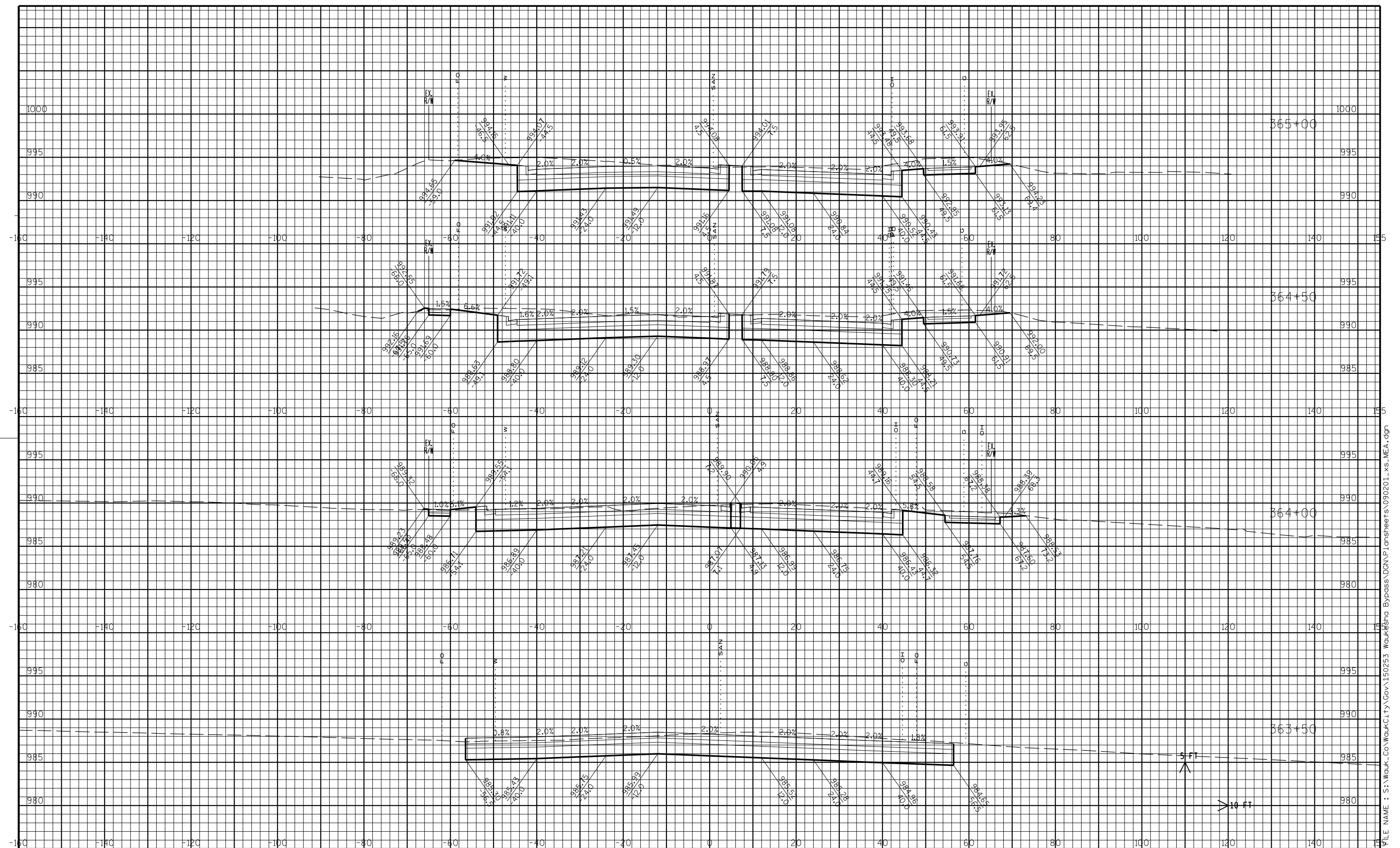


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CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS

APPROVED: _____ DATE: _____

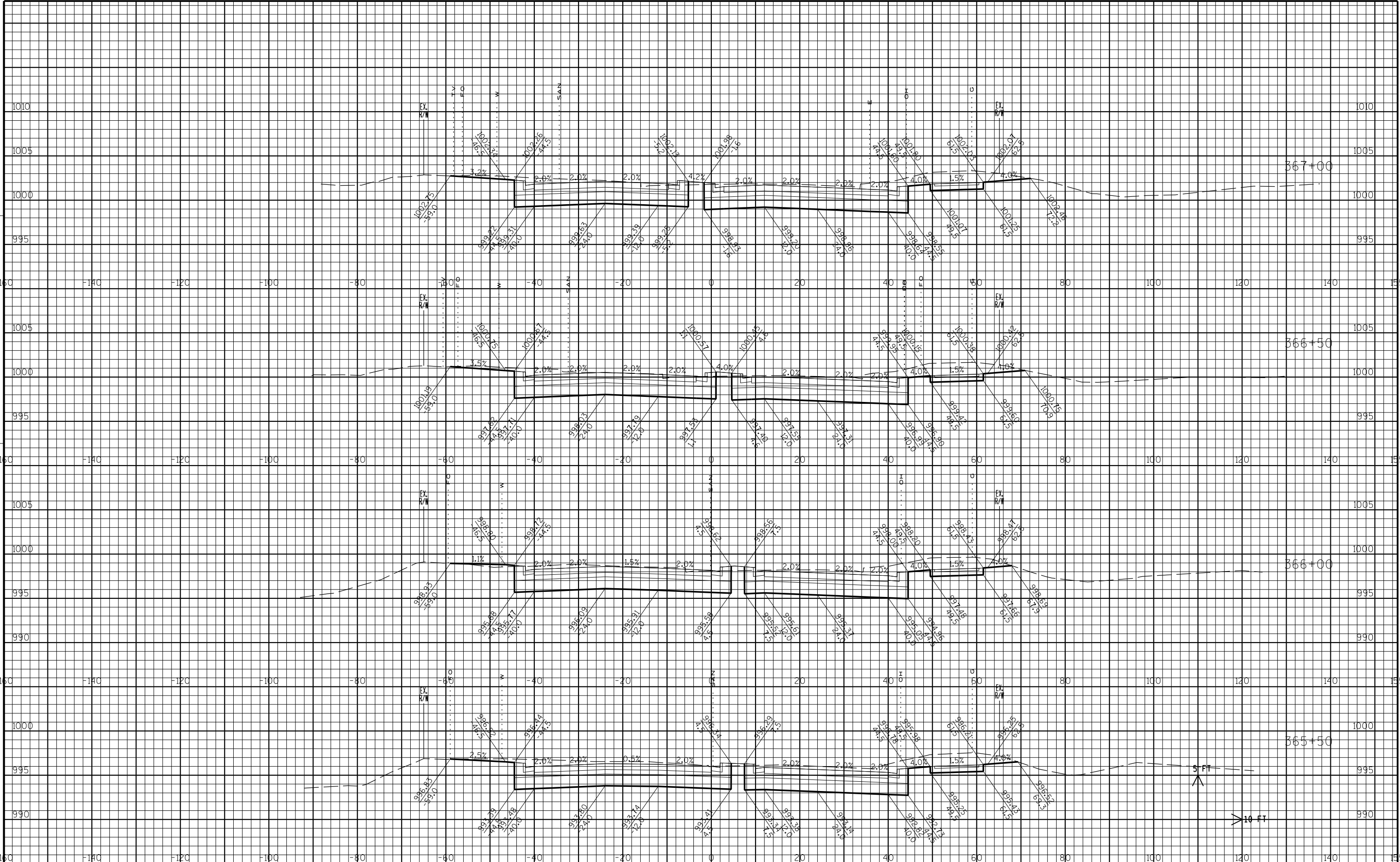
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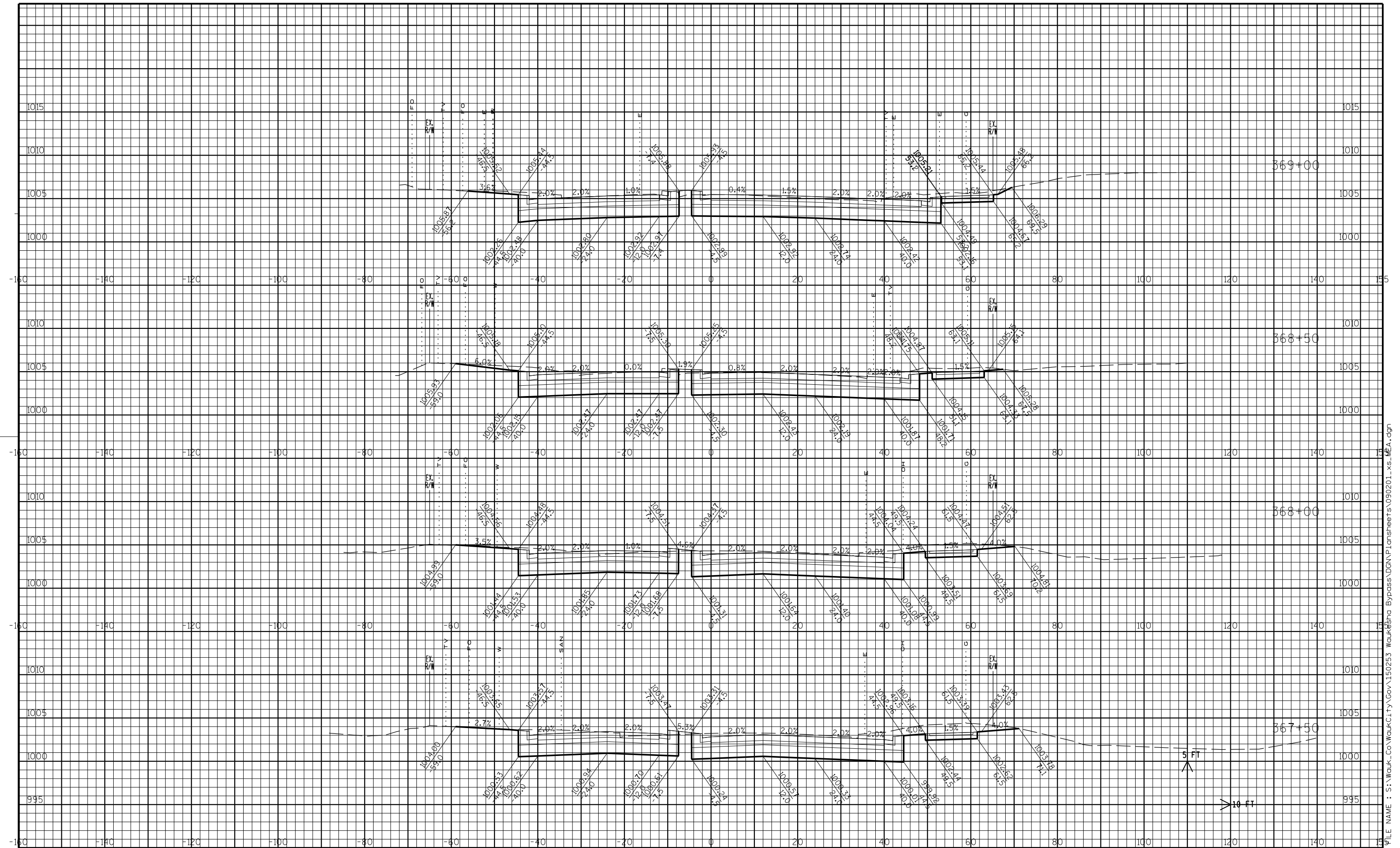
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PLOT DATE : 10/21/2016

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CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS

MEADOWBROOK RD
CROSS SECTIONS

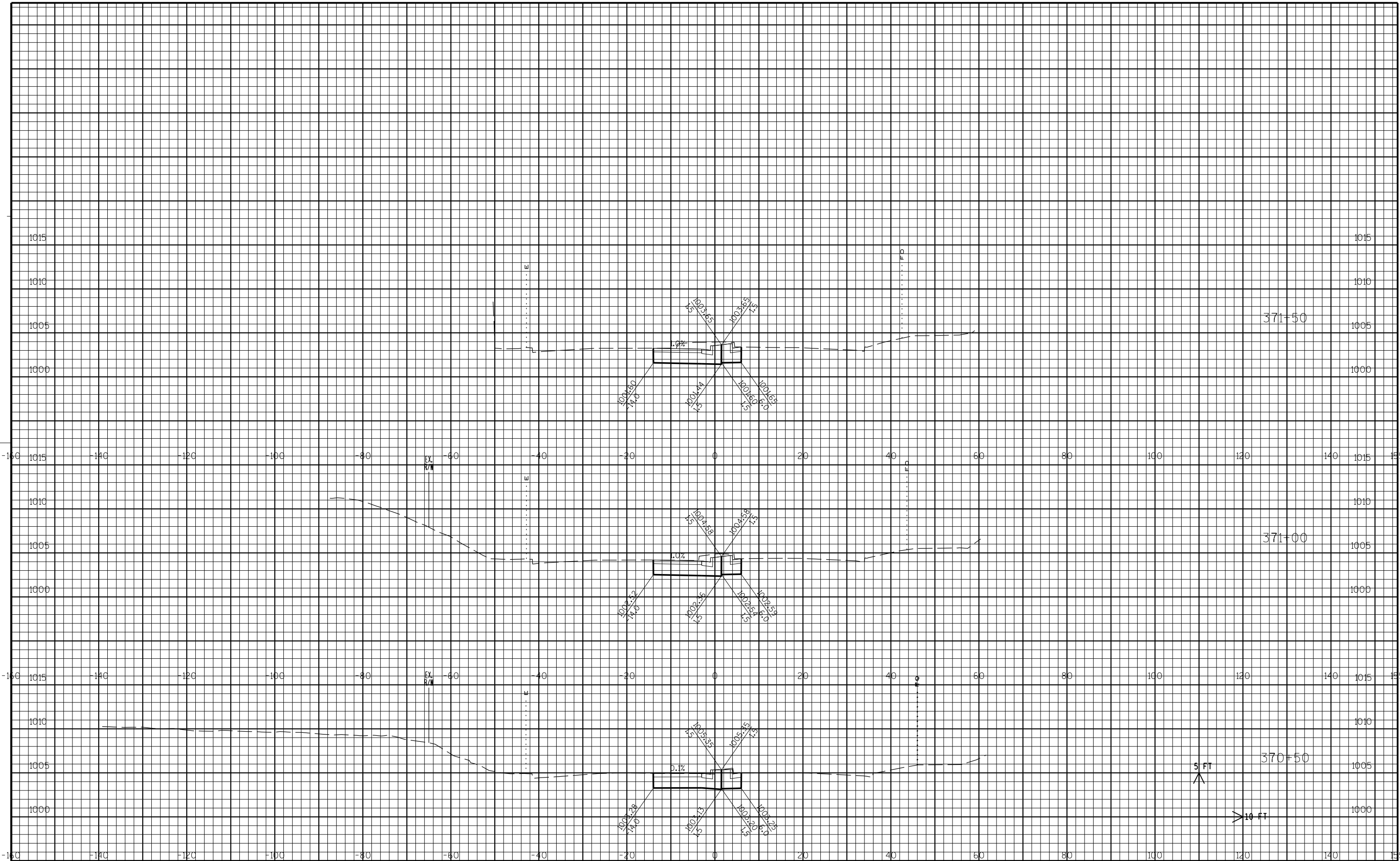
APPROVED: _____ DATE: _____
APPROVED: _____ DATE: _____

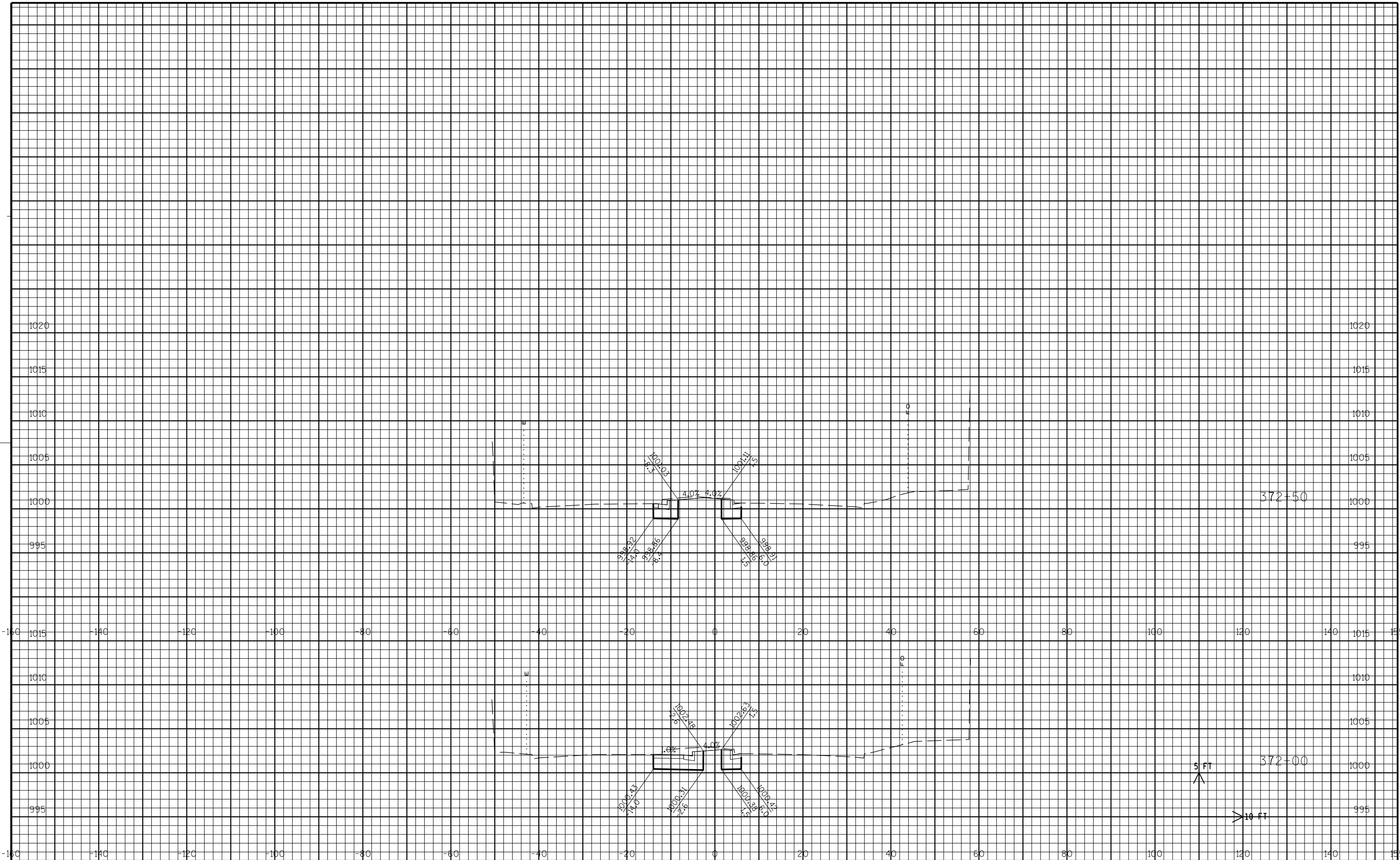
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CHECKED BY: NAB

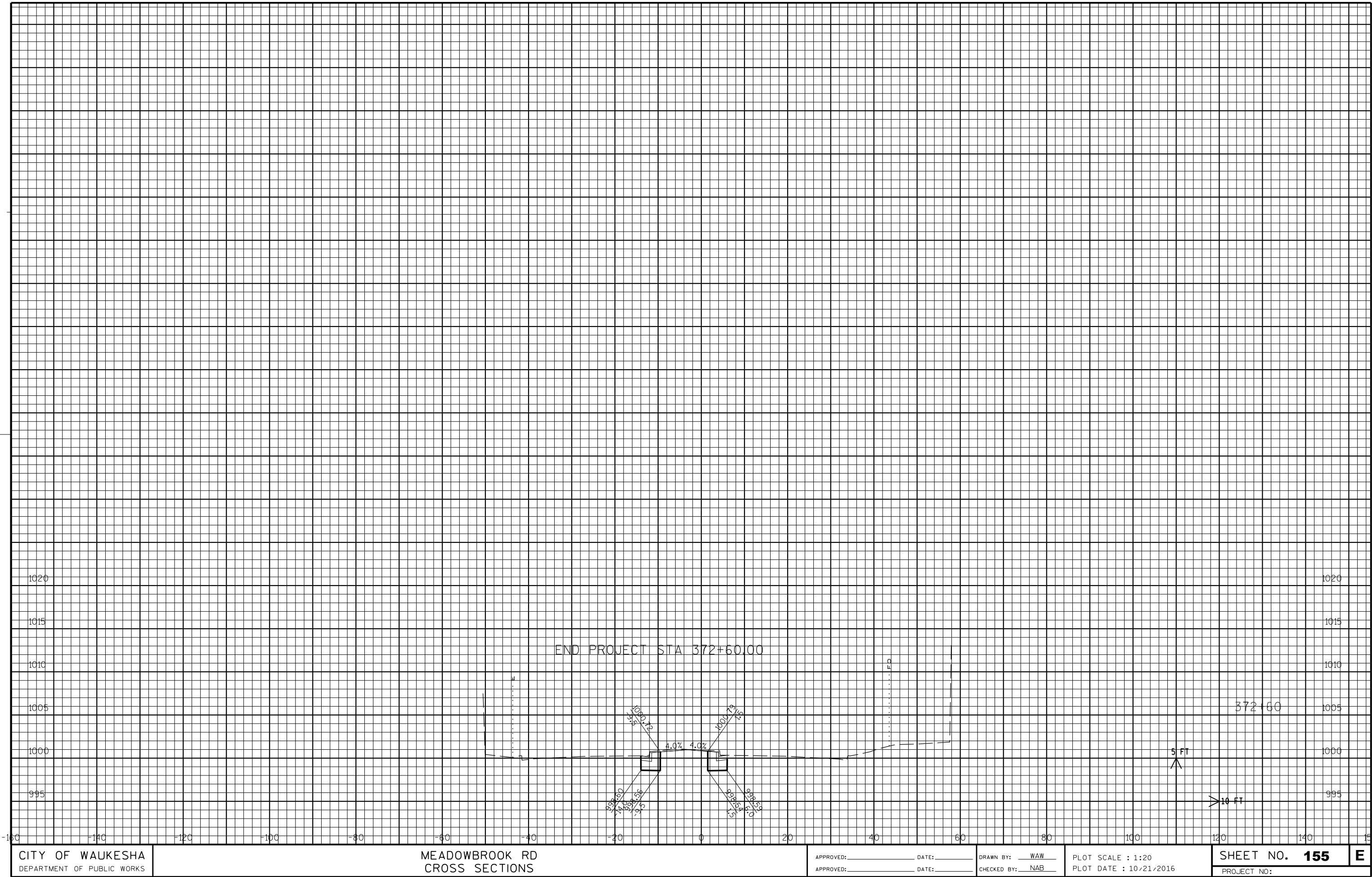
PLOT SCALE : 1:20
PLOT DATE : 10/21/2016

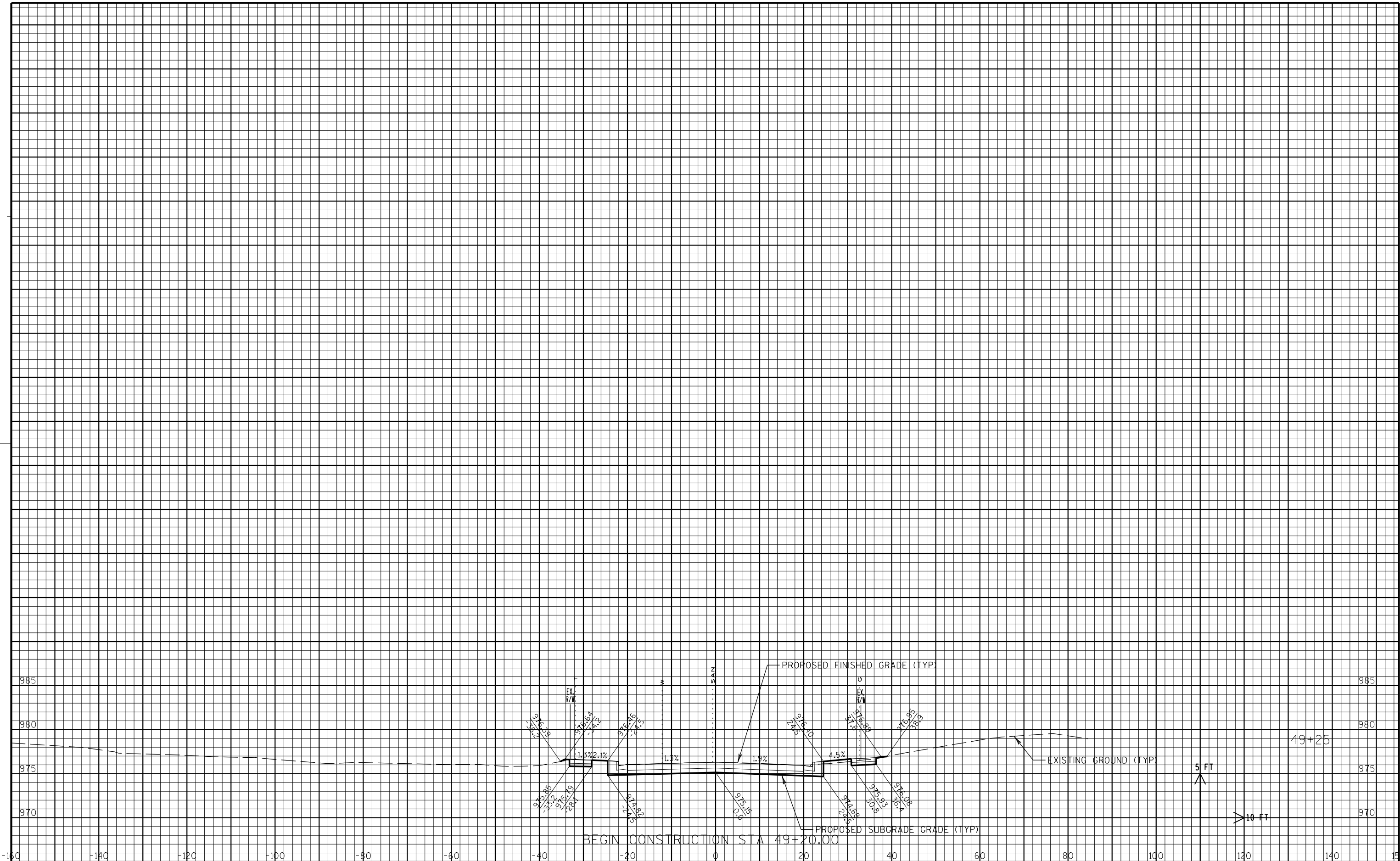
SHEET NO. 151
PROJECT NO:

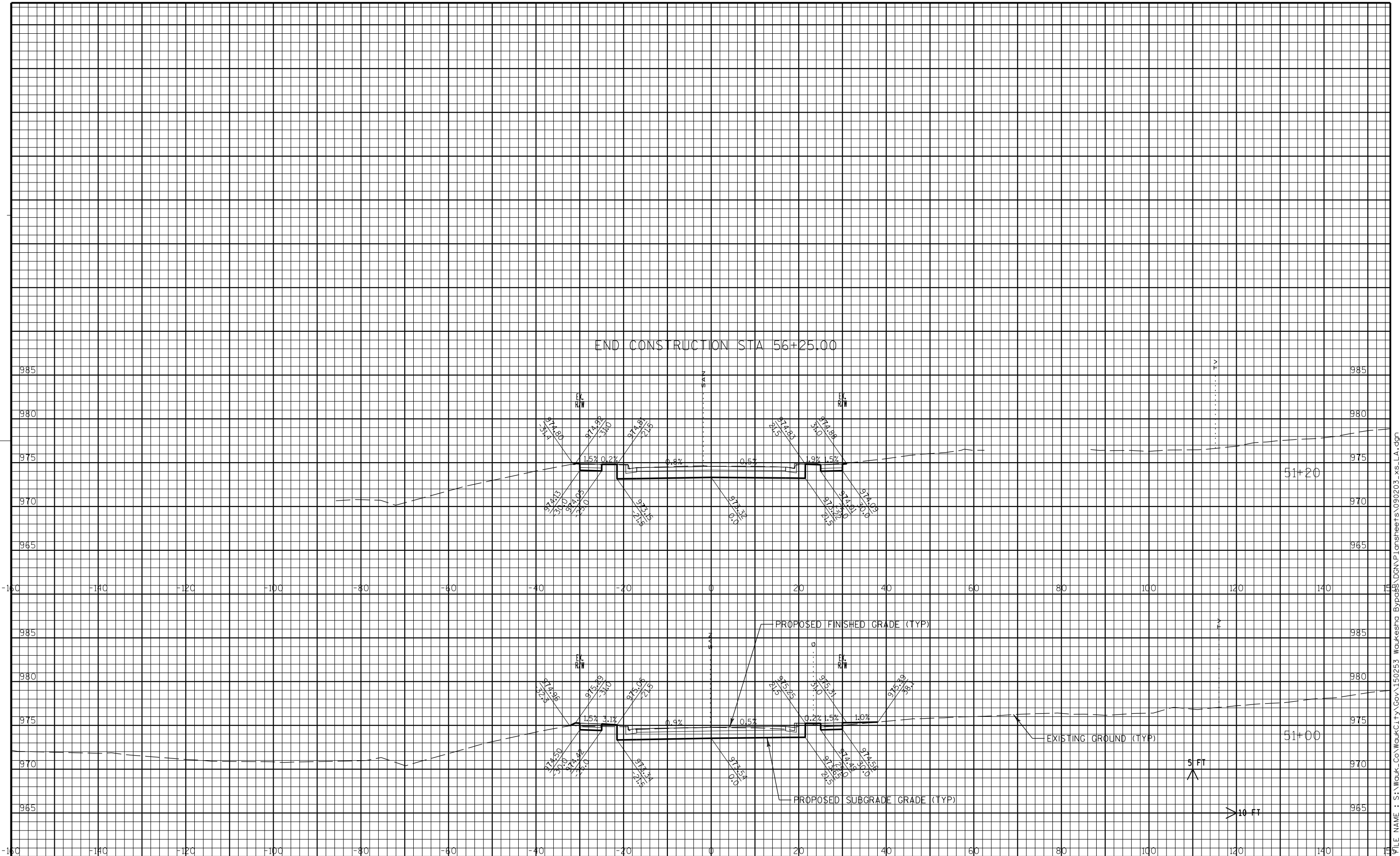
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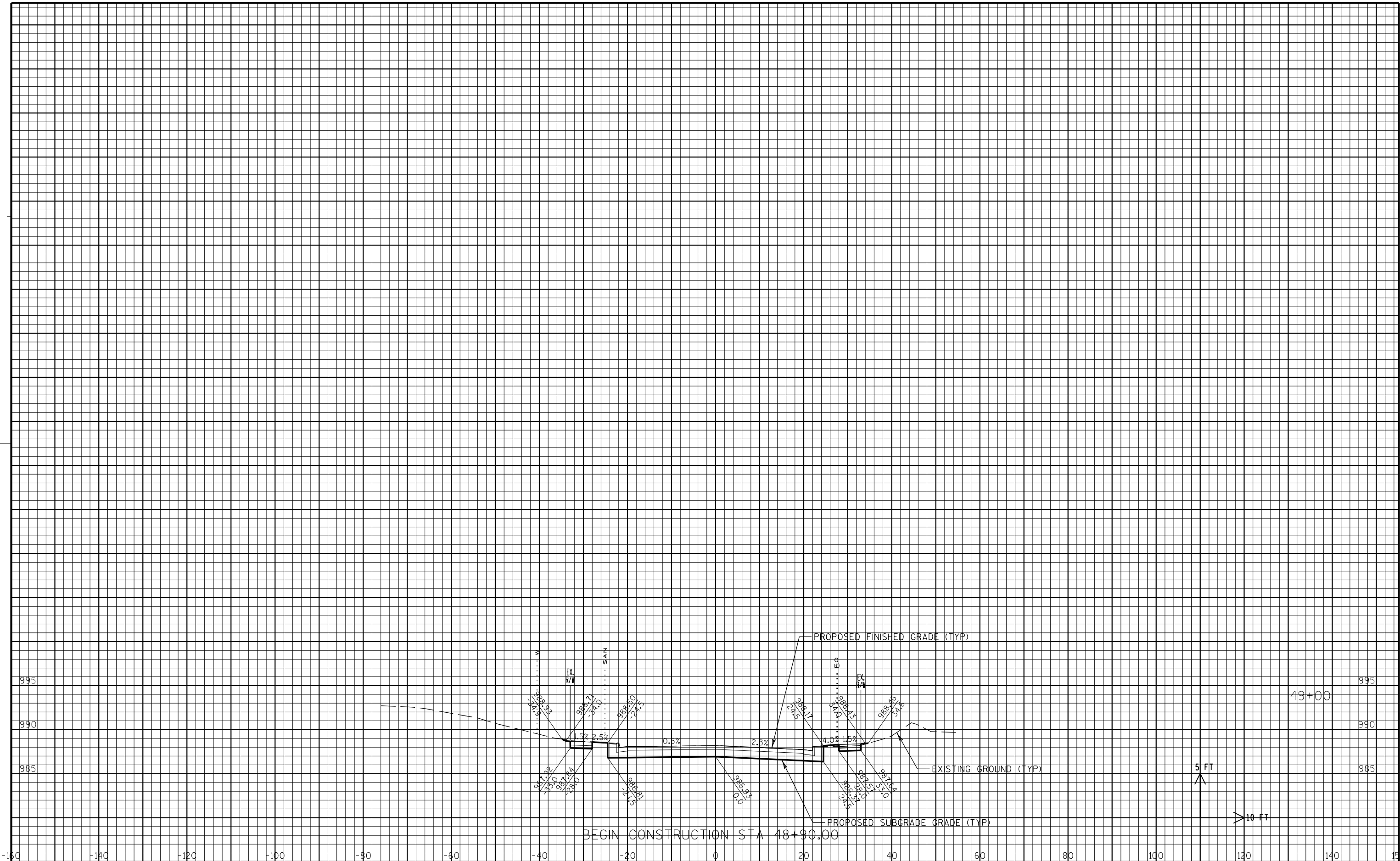


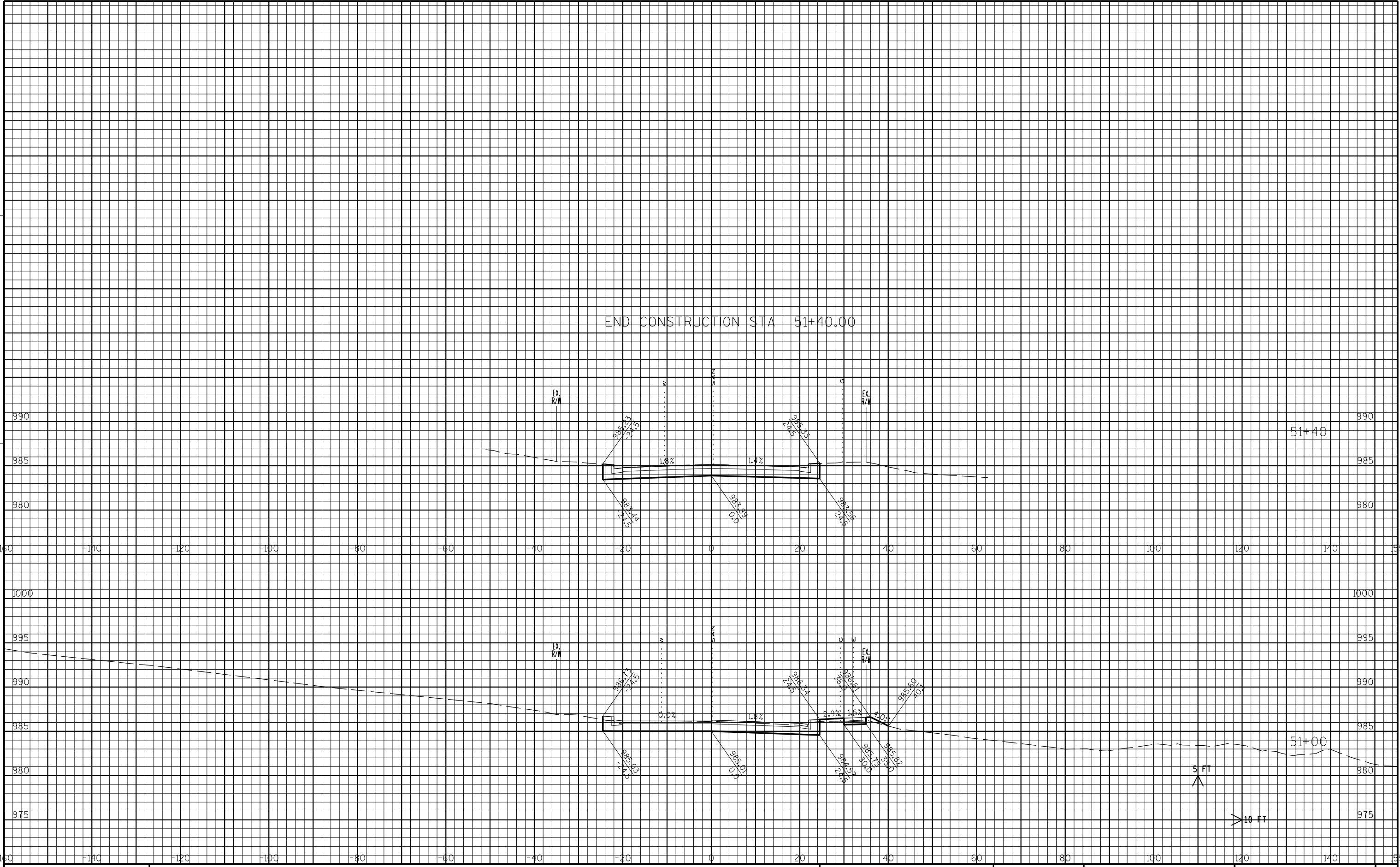






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CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS

WOODRIDGE LN
CROSS SECTIONS

APPROVED: _____ DATE: _____
APPROVED: _____ DATE: _____

DRAWN BY: WAW
CHECKED BY: NAB

PLOT SCALE : 1:20
PLOT DATE : 10/21/2016

SHEET NO. **159** **E**
PROJECT NO:

FILE NAME : S:\Waukesha\City\Gov\150253 Waukesha Bypass\VDGN\PL01\Streets\090205_xs_w0.dgn