

PROJECT ID 1302-00-71, 1302-00-73
WITH: N/A

COUNTY MILWAUKEE

ORDER OF SHEETS

SECTION NO.	TITLE
1	TYPICAL SECTIONS AND DETAILS
2	ESTIMATE OF QUANTITIES
3	MISCELLANEOUS QUANTITIES
4	PLAN AND PROFILE
5	STANDARD DETAIL DRAWINGS
6	STRUCTURE PLANS
7	COMPUTER EARTHWORK DATA
TOTAL SHEETS	130



DESIGN DESIGNATION	E. RUSSELL AVE. S. LINCOLN MEMORIAL DR. TO S. BAY ST.	S. BAY ST. E. RUSSELL AVE. TO E. POTTER AVE.	S. KINNICKINNIC AVE. BRIDGE OVER KINNICKINNIC RIVER
A.D.T. (CURRENT)	4,500-7,100	2,100	8,500
A.D.T. (2032)	5,200-8,200	2,400	9,800
D.H.V.	600-1,000	250	1,200
D.	79%-84%	68%	63%
T.	1%	0.3%	0.0%
DESIGN SPEED	30 M.P.H.	30 M.P.H.	35 M.P.H.
ESALS	N/A	N/A	N/A

DESIGN DESIGNATION	S. WATER ST. E. WASHINGTON ST. TO E. PITTSBURGH AVE.	E. PITTSBURGH AVE. S. WATER ST. TO E. ERIE ST.
A.D.T. (CURRENT)	900	5,500
A.D.T. (2034)	1,000	6,300
D.H.V.	100	800
D.	69%	65%
T.	15.5%	4.40%
DESIGN SPEED	30 M.P.H.	30 M.P.H.
ESALS	796,000	708,000

CONVENTIONAL SIGNS

COUNTY LINE	---
TOWNSHIP OR RANGE LINE	---
SECTION LINE	---
CORPORATE OR CITY LIMITS	---
PROPERTY LINE	---
STANDARD BENCH MARK	⊙
EXISTING RIGHT OF WAY LINE	---
PROPOSED SEWER LATERAL	---
BASE OF SURVEY LINE	---
CONCRETE WALK/DWY. REMOVAL	---
CONSTRUCT CONCRETE SIDEWALK 5'-INCH	---
LIMITS OF CONCRETE PAVEMENT REMOVAL	---
CATCH BASIN OR INLET	---
EXISTING	⊠
PROPOSED	⊡

COMBUSTIBLE FLUIDS UNDER PRESSURE	---
RAILROADS	---
FENCE	---
FIRE & POLICE CALL BOX	---
LIGHT POLE	---
POWER POLE	---
TELEPHONE OR TELEGRAPH POLE	---
TRAFFIC SIGNAL	---
TRAFFIC SIGNAL CONTROL BOX	---
HYDRANT	---
GAS OR WATER GATE VALVE	---
MANHOLES - SEWER	---
MANHOLES - UTILITY (TYPE)	---
TREES - EXISTING	---
TREES - TO BE REMOVED	---

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

BAY VIEW-DOWNTOWN
BIKEWAY
NON HWYSOUTH WATER STREET
EAST WASHINGTON STREET TO North BROADWAY
LOCAL STREET

MILWAUKEE COUNTY

MILWAUKEE COUNTY

STATE PROJECT NUMBER
1302-00-71STATE PROJECT NUMBER
1302-00-73

GN



STRUCTURE B-40-591

END PROJECT
STA. 8+50, PITTSBURGH T/L

STRUCTURE B-40-952

BEGIN CONSTRUCTION
STA. 1+00, WATER T/LEND CONSTRUCTION
STA. 86+49.5, KINNICKINNIC T/LBEGIN CONSTRUCTION
STA. 85+64.5, KINNICKINNIC T/LEND CONSTRUCTION
STA. 24+00, RUSSELL T/LBEGIN PROJECT
STA. 2+00, RUSSELL T/L
Y. = 371,725 (±200)
X. = 2,564,831 (±200)THE COORDINATES ON THIS PLAN ARE BASED ON
THE WISCONSIN STATE PLANE COORDINATE SYSTEM,
MILWAUKEE COUNTY, NAD 27 SOUTH ZONE.ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO
THE CITY OF MILWAUKEE DATUM.TO CONVERT ELEVATIONS SHOWN ON THIS PLAN TO
NATIONAL GEODESIC VERTICAL DATUM OF 1929, ADD
580.603 TO ELEVATIONS SHOWN ON THIS PLAN.

TOTAL NET LENGTH OF CENTERLINE = 1.062 MI. (URBAN)

LAYOUT
SCALE 3/4 MI.

PLOT DATE:

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1302 - 00 - 71	WISC 2014104	I
1302 - 00 - 73	WISC 2014105	I

Accepted For
City of Milwaukee11/27/13
(Date) *Michael L. ...*
for Commissioner of Public Works

Original Plans Prepared By

11/27/13
(Date) *Jeffrey S. Polenski*
City EngineerSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor City of Milwaukee
Designer City of Milwaukee
Project Manager ...
Region Examiner ...
Region Supervisor ...
C.O. Examiner ...

APPROVED FOR THE DEPARTMENT

DATE: 2/5/2014 *...*
(Signature)

GENERAL NOTES

1. ALL OPENINGS BELOW SUBGRADE, RESULTING FROM REMOVALS OR ABANDONMENTS, SHALL BE BACKFILLED WITH BASE AGGREGATE DENSE, 1-1/4 INCH.
2. ALL DISTURBED AREAS, NOT SURFACED, ARE TO BE COVERED WITH 4" OF TOPSOIL, SODDED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
3. PLACE SOD LAWN WITHIN 5 CALENDER DAYS AFTER PLACING TOPSOIL.
4. NO TREES OR SHRUBS SHALL BE REMOVED UNLESS DESIGNATED FOR REMOVAL BY THE ENGINEER.
5. INLET SCREENS ARE TO BE PLACED AT CATCH BASINS / INLETS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER TO PREVENT SOIL FROM ENTERING THE SEWERS. SEE CONSTRUCTION PLANS.
6. WHEN 3" HMA PAVEMENT IS REQUIRED, IT SHALL CONSIST OF A 1-1/2" LOWER LAYER, AND A 1-1/2" UPPER LAYER. ALL LAYERS 2" OR LESS SHALL BE PLACED AS A SINGLE LAYER. THE NOMINAL SIZE OF THE AGGREGATE USED IN THE MIXTURE SHALL BE 9.5 MM.
7. WHEN 7" HMA PAVEMENT IS REQUIRED, IT SHALL CONSIST OF LOWER THREE LAYERS, WITH A 1-1/2" UPPER LAYER HAVING AN AGGREGATE NOMINAL SIZE OF 9.5MM. THICKNESS OF ANY LOWER LAYER SHALL BE 3" MAXIMUM.
8. THE LOCATION OF LONGITUDINAL JOINTS IN HMA PAVEMENT SHALL BE APPROVED BY THE ENGINEER.
9. TRANSVERSE JOINTS IN THE CONCRETE WALK SHALL BE CONSTRUCTED AT INTERVALS EQUAL TO THE WIDTH OF THE CONCRETE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
10. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.

STANDARD ABBREVIATIONS

- ASPH. - ASPHALT
- B.M. - BENCH MARK
- CTR. - CENTER
- C/L - CENTER LINE
- COMB. - COMBINED
- CONC. - CONCRETE
- C.W. - CONCRETE WALK
- COR. - CORNER
- C - CURB
- ELEV. - ELEVATION
- ENT. - ENTRANCE
- EXIST. - EXISTING
- F - FLANGE
- FULL FA - FULL CURB FACE
- G - GUTTER, OR GAS
- HYD. - HYDRANT
- LT. - LEFT
- MMSD - MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
- N.I.U. - NOT IN USE
- *O' FA - NO CURB FACE
- P/L. - PROPERTY LINE
- R OR RAD. - RADIUS
- RET. - RETAINING
- RT. - RIGHT
- R/W - RIGHT OF WAY
- TEL - AT & T
- TES - TRAFFIC ENGINEERING,AND ELECTRICAL SERVICES (CITY UNDERGROUND CONDUITS)
- T/L - TRANSIT LINE
- VT - VARIABLE THICKNESS
- WEP - WISCONSIN ELECTRIC POWER

ORDER OF SECTION 2 SHEETS

GENERAL NOTES

PROJECT OVERVIEW

TYPICAL SECTIONS

CONSTRUCTION DETAILS

DRAINAGE DETAILS

PLAN DETAILS

UTILITIES & DRAINAGE

PAVEMENT MARKINGS

TRAFFIC CONTROL

UTILITY CONTACTS

OTHER CONTACTS

CITY OF MILWAUKEE

TONY KOTECKI
841 N. BROADWAY, RM. 710
MILWAUKEE, WI 53202
PHONE: 414-286-2433

WE ENERGIES - GAS

TOM MINESAL
500 S. 116TH ST.
WEST ALLIS, WI 53214
PHONE: 414-944-5755

WE ENERGIES - ELECTRIC

KEN FRANECKI
500 S. 116TH ST.
WEST ALLIS, WI 53214
PHONE: 414-944-5531

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT

BOB REBITSKI
260 W. SEEBOTH AVE.
MILWAUKEE, WI 53204
PHONE: 414-225-2214

AMERICAN TRANSMISSION COMPANY

PATRICIA ELLIFSON
W234 N2000 RIDGEVIEW PARKWAY CT.
WAUKESHA, WI 53188
PHONE: 262-506-6773

VERIZON

(MCI COMMUNICATIONS SERVICES)
OSP NATIONAL SUPPORT/INVESTIGATIONS
THOMAS BUHER
2400 N. GLENVILLE
RICHARDSON, TX 75082
PHONE: 708-458-6410

QWEST COMMUNICATIONS

KIMBERLY JORDAN
700 W. MINERAL AVE.
LITTLETON, CO 80120
PHONE: 800-283-4237

TIME WARNER CABLE

LUKAS LACROSSE
1320 N. DR. MARTIN LUTHER KING JR. DR.
MILWAUKEE, WI 53212
PHONE: 414-908-4766

AT & T

MARK EDER
2005 PEWAUKEE RD.
WAUKESHA, WI 53188
PHONE: 262-896-7434

TCG MILWAUKEE

DON DIETSCH
NORTHWIND TECHNICAL SERVICES, LLC
383 WILLIAMSTOWNE SUITE B
DELAFIELD, WI 53018
PHONE: 262-646-5602

KENTUCKY DATA LINK, INC.

JIM KOSTUCH
13935 BISHOPS DR.
BROOKFIELD, WI 53005
PHONE: 262-792-7938

MIDWEST FIBER NETWORKS

JOEL BOJARSKI
3701 W. BURNHAM ST. SUITE C
MILWAUKEE, WI 53215
PHONE: 414-459-3551

UNION PACIFIC RAILROAD

JOHN VENICE 101 N. WACKER DR. CHICAGO IL, 60606 PHONE: 312-777-2043 jvenue@up.com	JAMES NUDERA 301 W. LAKE ST. SUITE 102 NORTHLAKE IL, 60164 PHONE: 708-649-5280
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WISCONSIN DEPT. OF NATURAL RESOURCES

MIKE THOMPSON - SOUTHEAST REGION SUPERVISOR
2300 N. DR. MARTIN LUTHER KING, JR. DR.
MILWAUKEE, WI 53212
PHONE: 414-263-8648

MILWAUKEE COUNTY TRANSIT SYSTEM

DAVID ZIAREK
1942 N. 17TH ST.
MILWAUKEE, WI 53205
PHONE: 414-343-1764

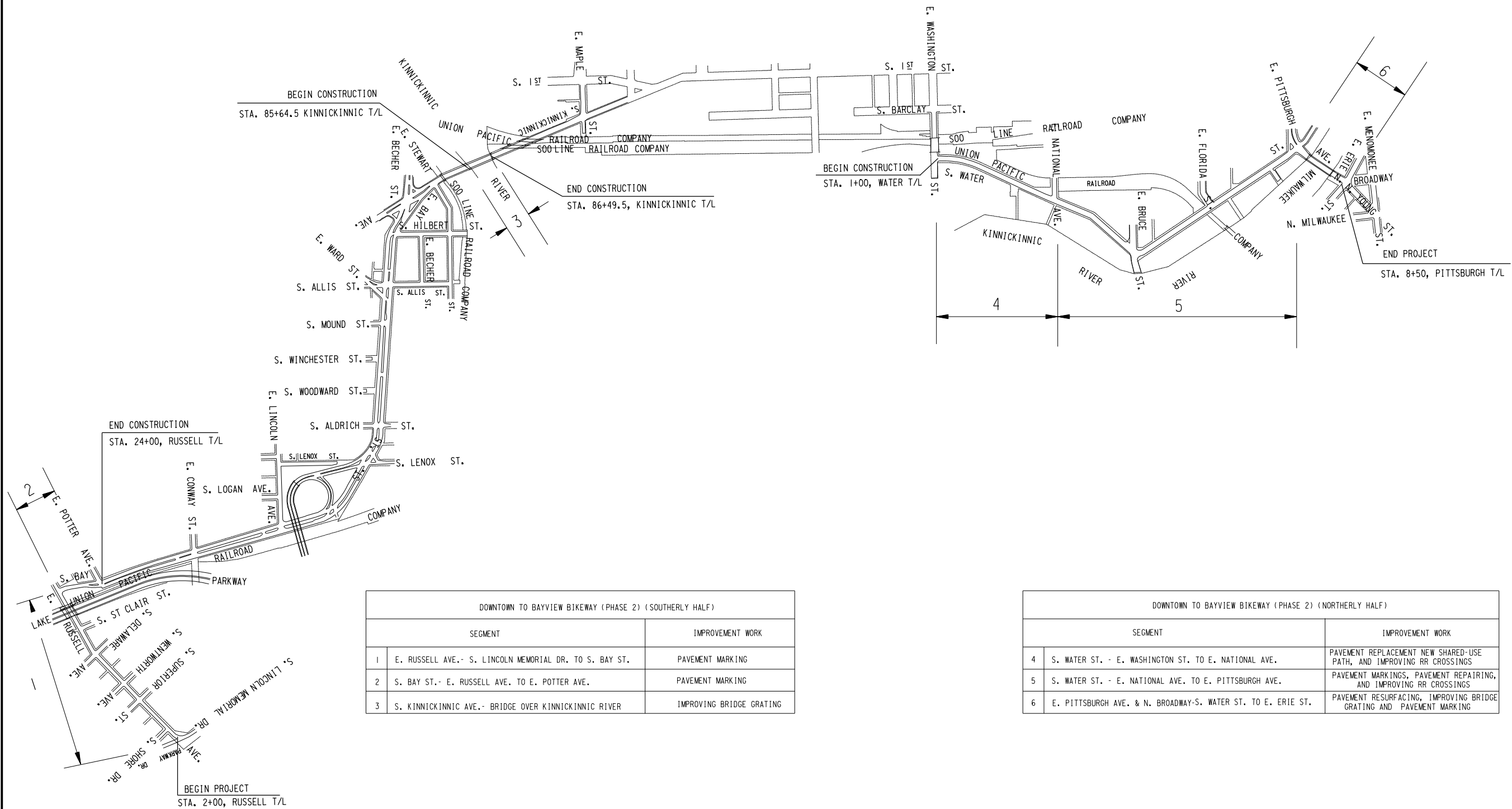
DESIGN CONSULTANT

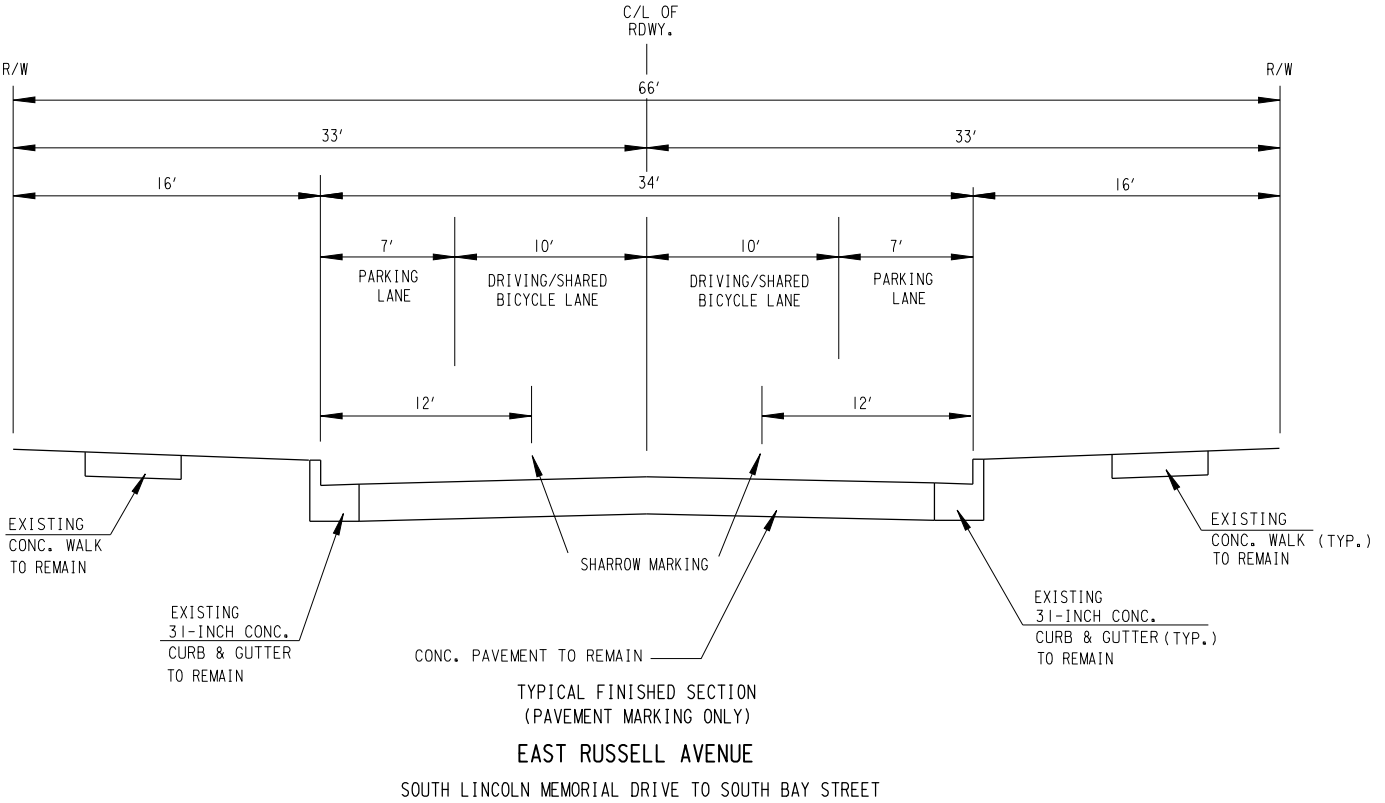
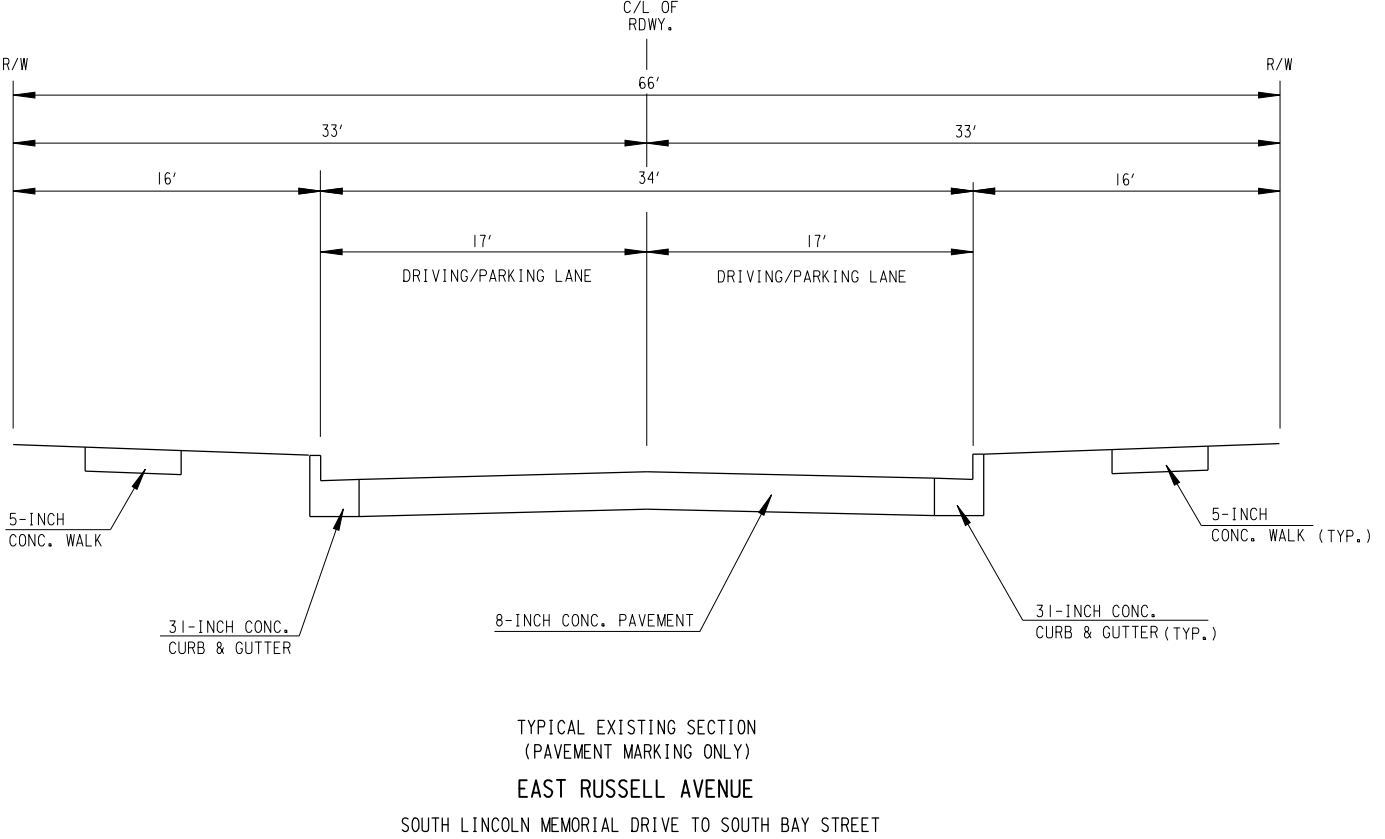
SAMUEL MEDHIN
841 N. BROADWAY RM 902
MILWAUKEE, WI 53202
PHONE: 414-286-0474
samuel.medhin@milwaukee.gov

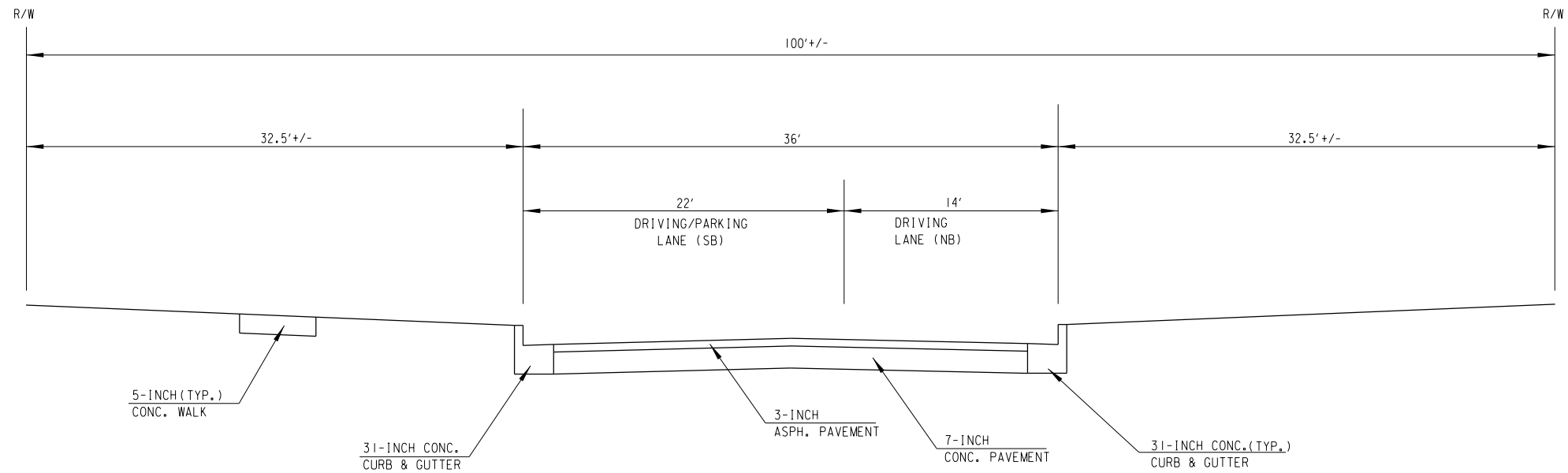
WISDOT PROJECT MANAGER

CHRISTINE HANNA
141 NW BARSTOW STREET
WAUKESHA, WI 53187
PHONE: 262-548-8809

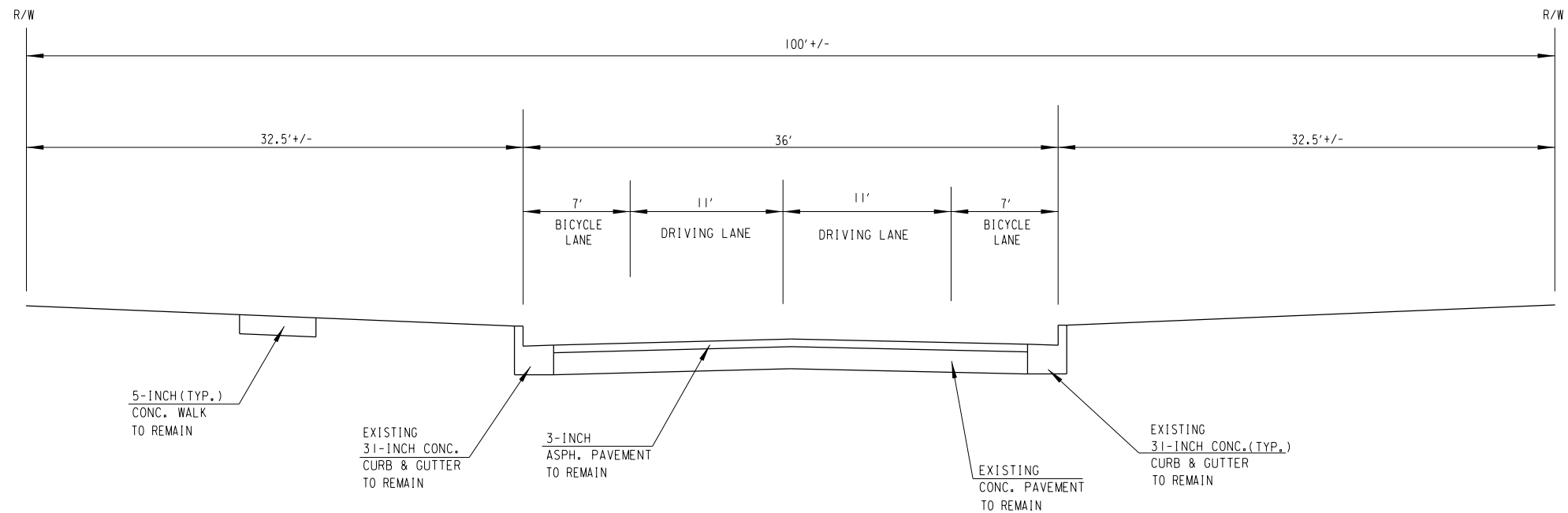




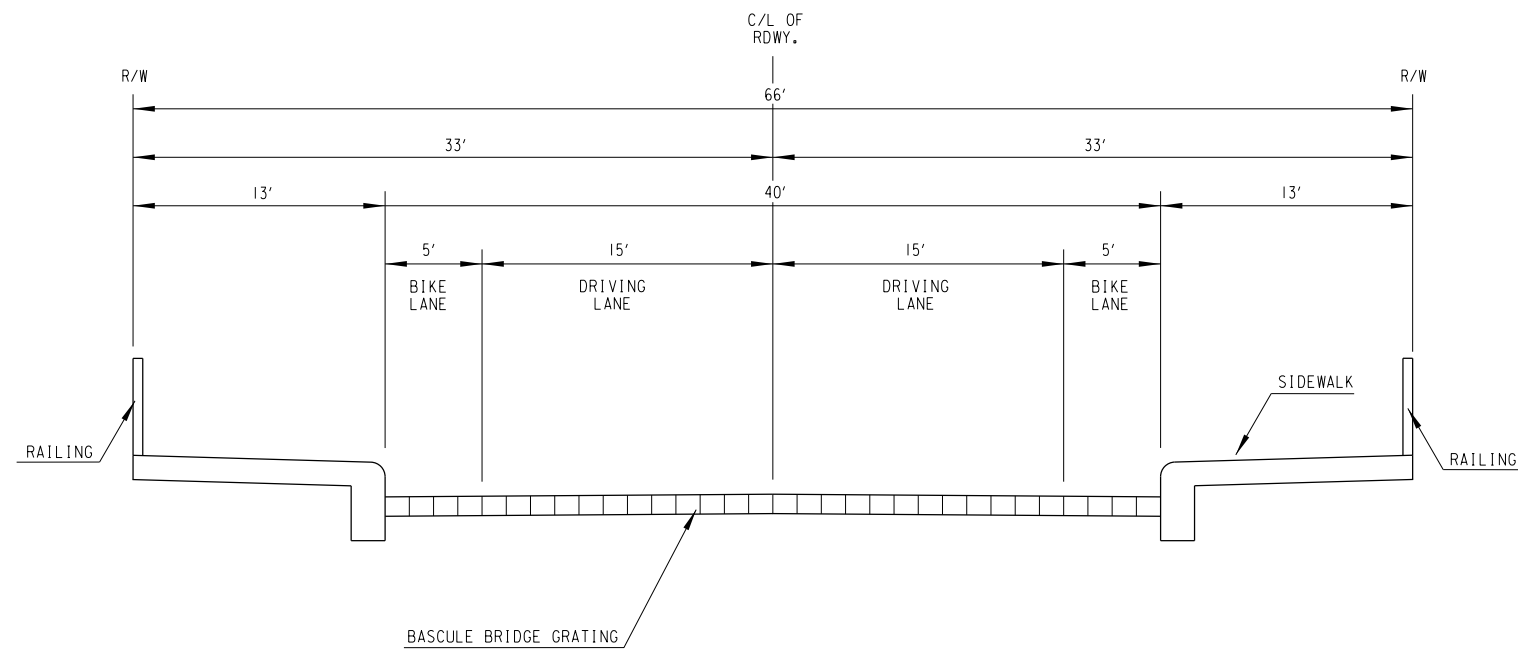




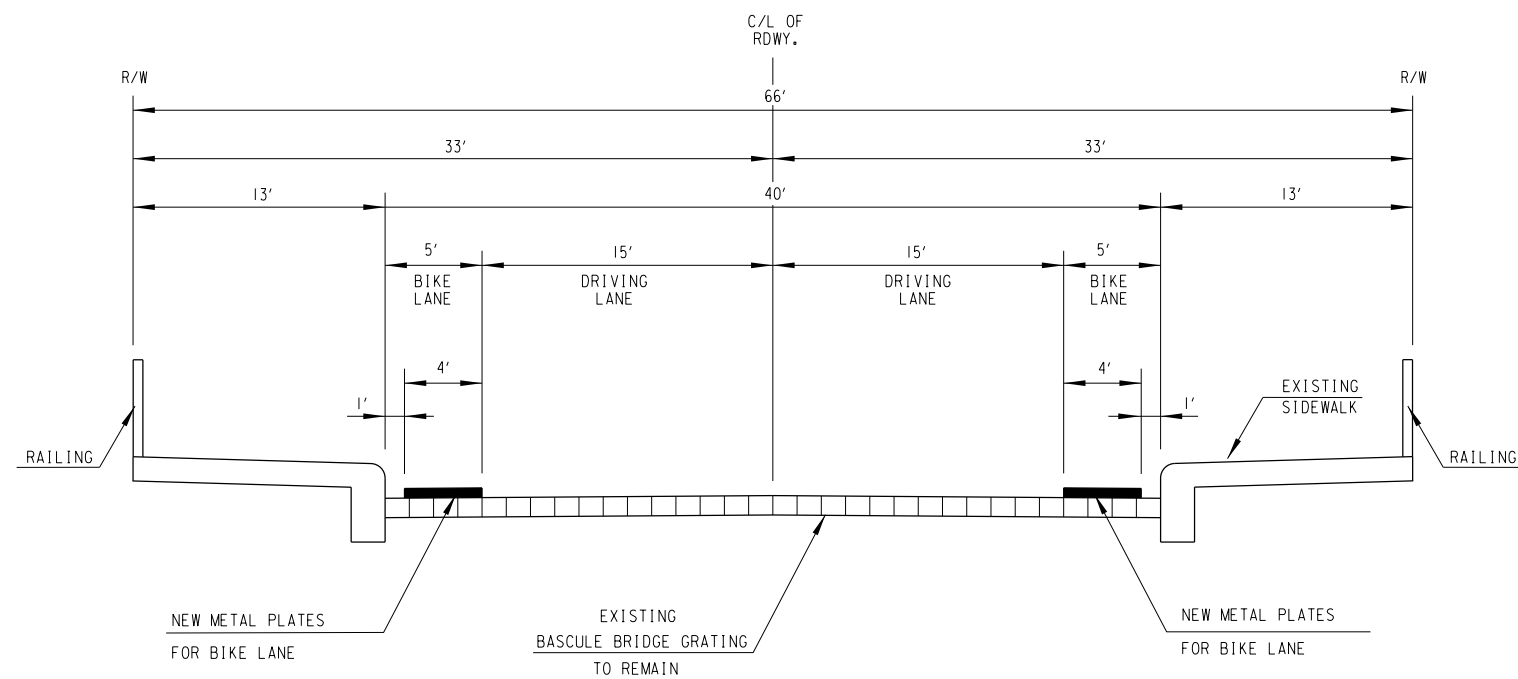
TYPICAL EXISTING SECTION
SOUTH BAY STREET
EAST RUSSELL AVENUE TO EAST POTTER AVENUE



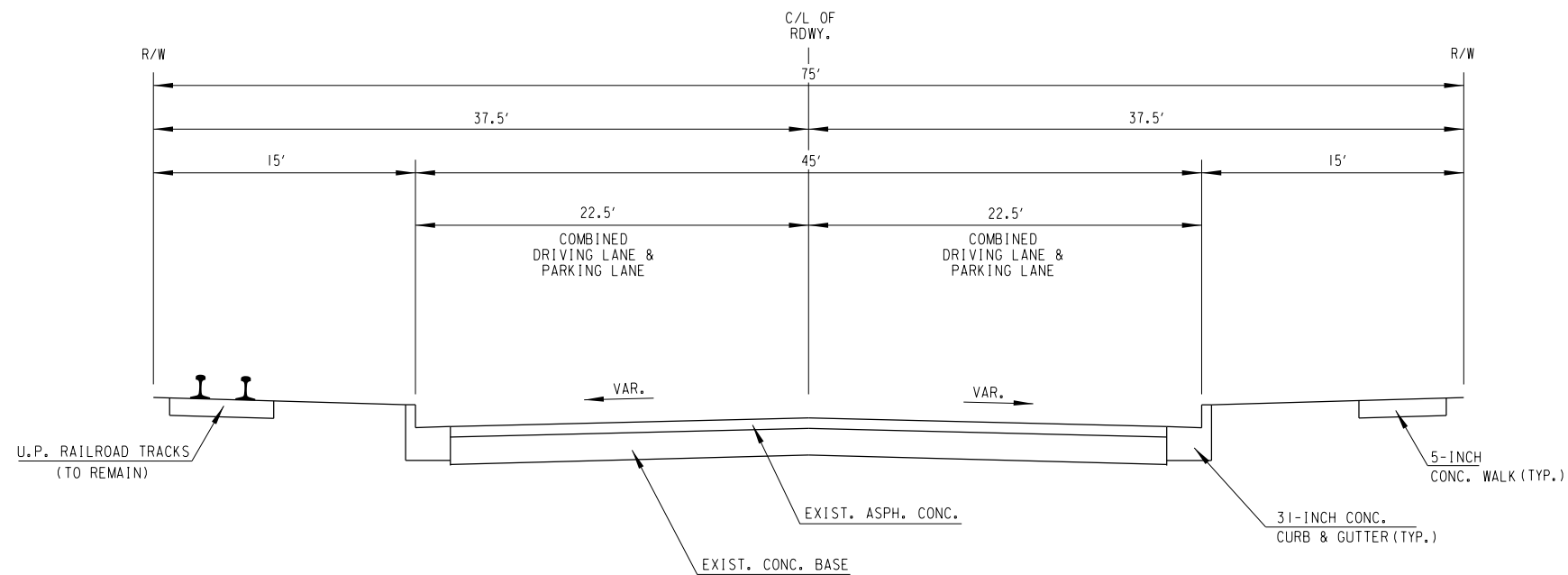
TYPICAL FINISHED SECTION
(PAVEMENT MARKING ONLY)
SOUTH BAY STREET
EAST RUSSELL AVENUE TO EAST POTTER AVENUE



TYPICAL EXISTING SECTION
SOUTH KINNICKINNIC AVENUE / BASCULE BRIDGE OVER KINNICKINNIC RIVER

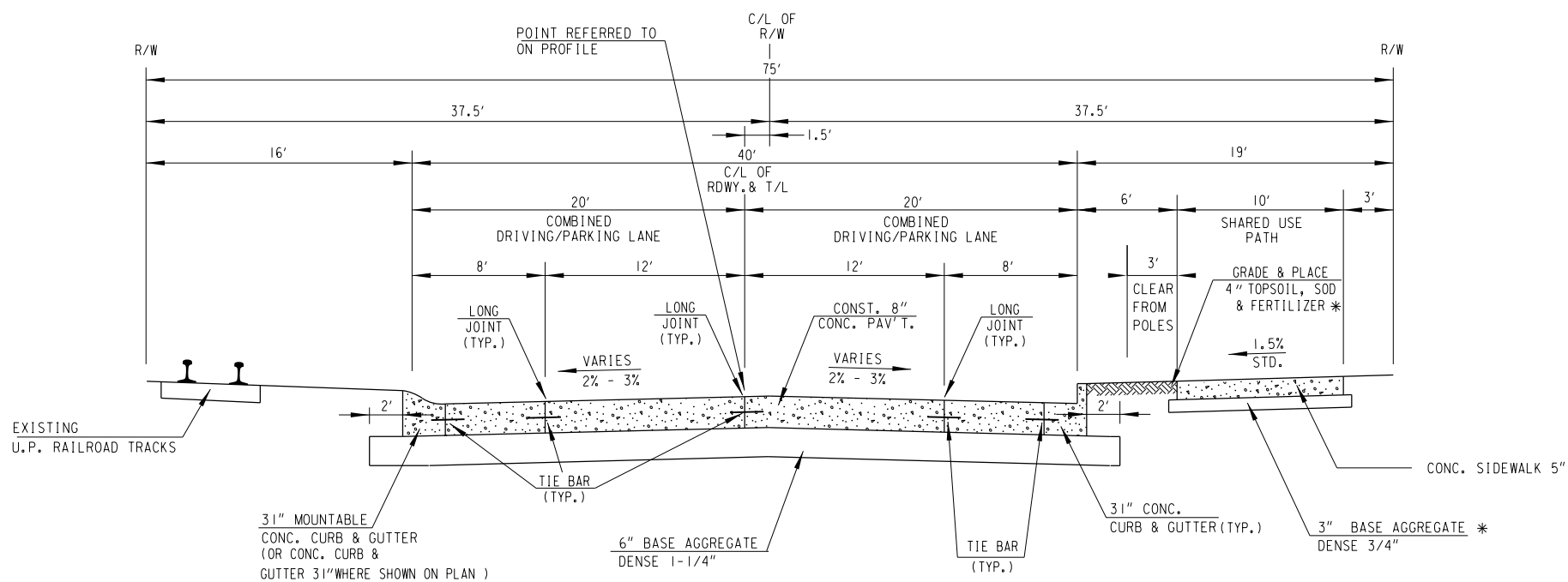


TYPICAL FINISHED SECTION
SOUTH KINNICKINNIC AVENUE / BASCULE BRIDGE OVER KINNICKINNIC RIVER



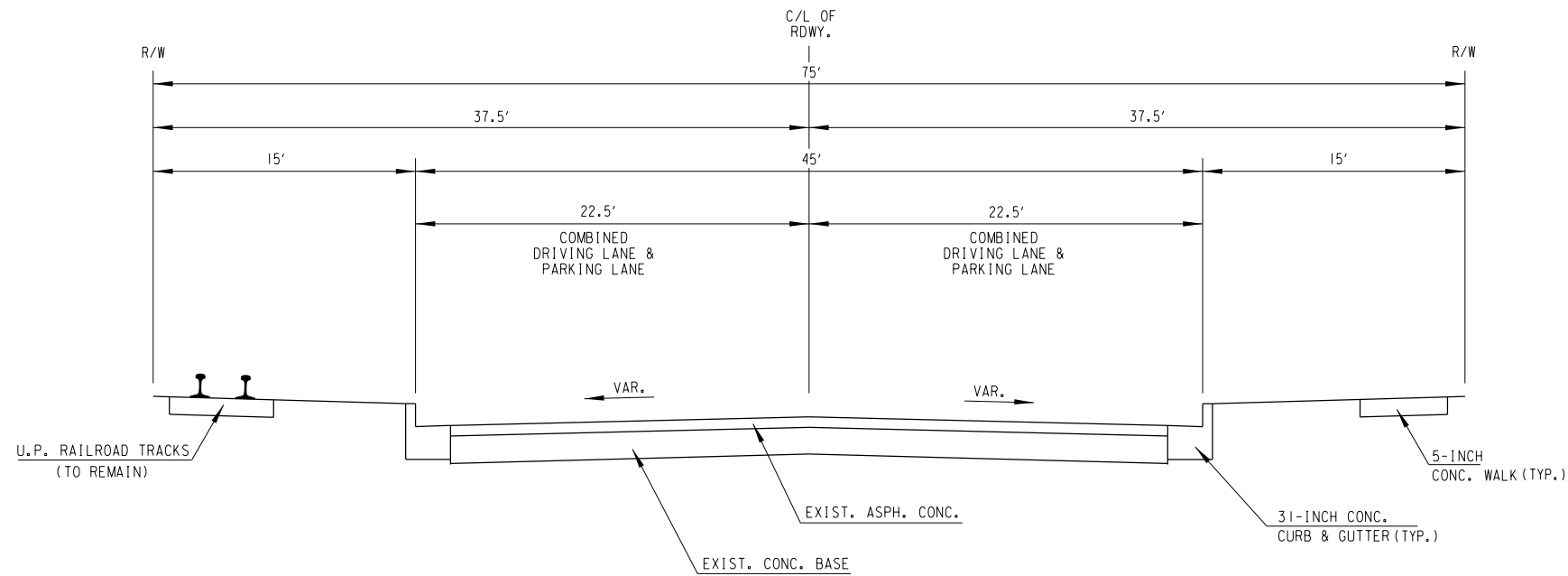
TYPICAL EXISTING SECTION
SOUTH WATER STREET
 STA. 00+27.2 TO STA. 13+50.0
 EAST WASHINGTON STREET TO EAST NATIONAL AVENUE
 (LOOKING NORTH)

NOTE: THERE ARE RAILROAD TRACKS IN THE ROADWAY TO BE IMPROVED BY THE RAILROAD OR REMOVED, AS SHOWN ON PLAN.



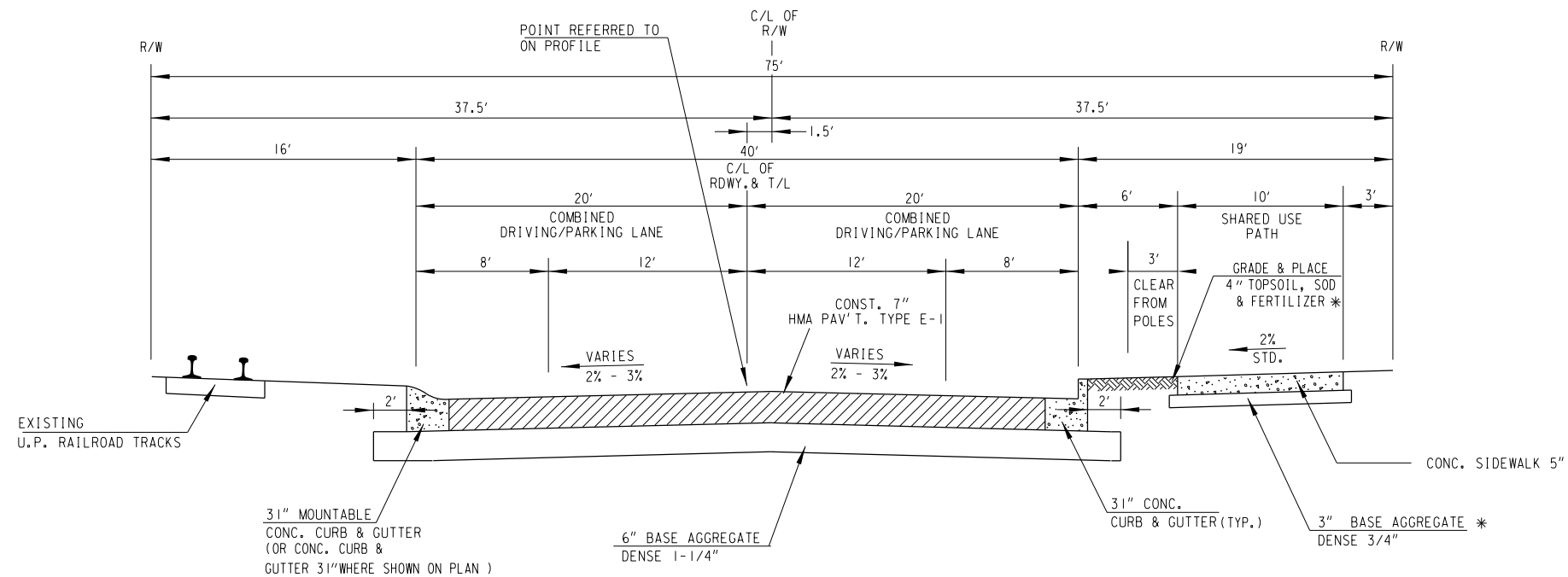
* WHERE THERE IS NO EXISTING BASE

TYPICAL FINISHED SECTION
SOUTH WATER STREET
 STA. 05+65.0 TO STA. 11+65.0
 EAST WASHINGTON STREET TO EAST NATIONAL AVENUE
 (LOOKING NORTH)



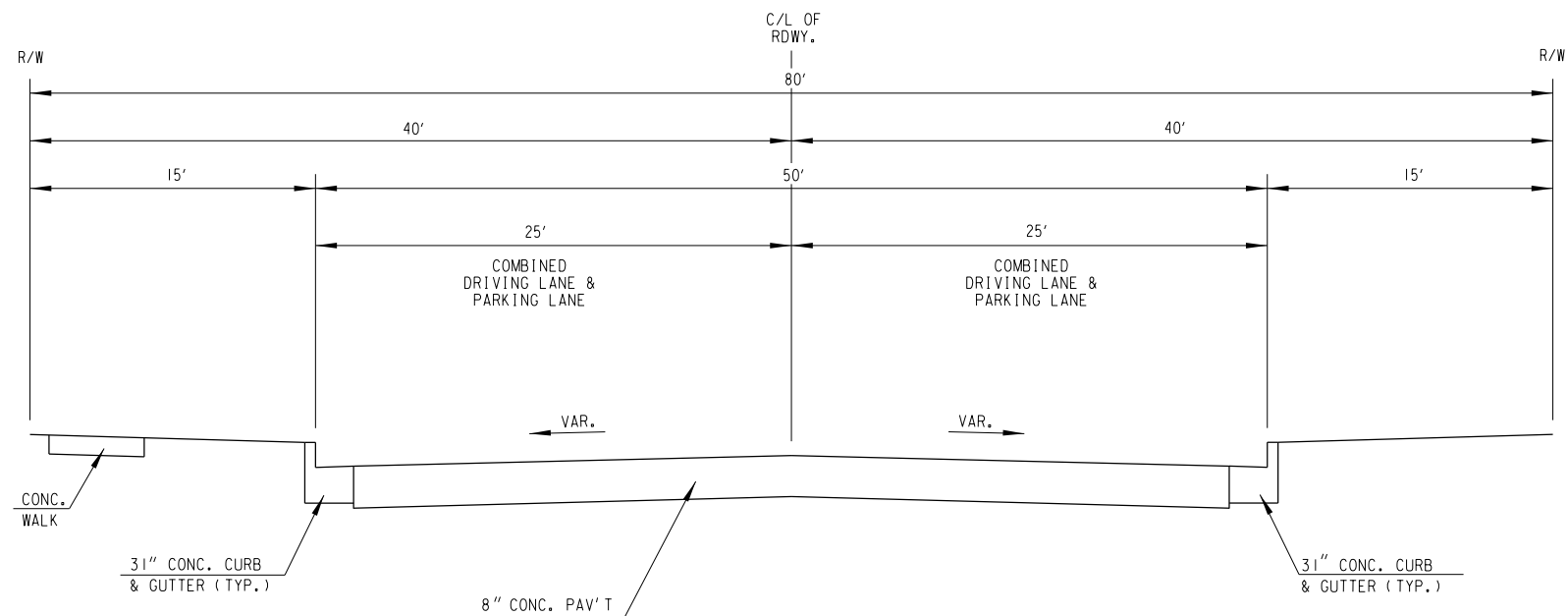
TYPICAL EXISTING SECTION
SOUTH WATER STREET
 STA. 00+27.2 TO STA. 13+50.0
 EAST WASHINGTON STREET TO EAST NATIONAL AVENUE
 (LOOKING NORTH)

NOTE: THERE ARE RAILROAD TRACKS IN THE ROADWAY
 TO BE IMPROVED BY THE RAILROAD OR REMOVED,
 AS SHOWN ON PLAN.

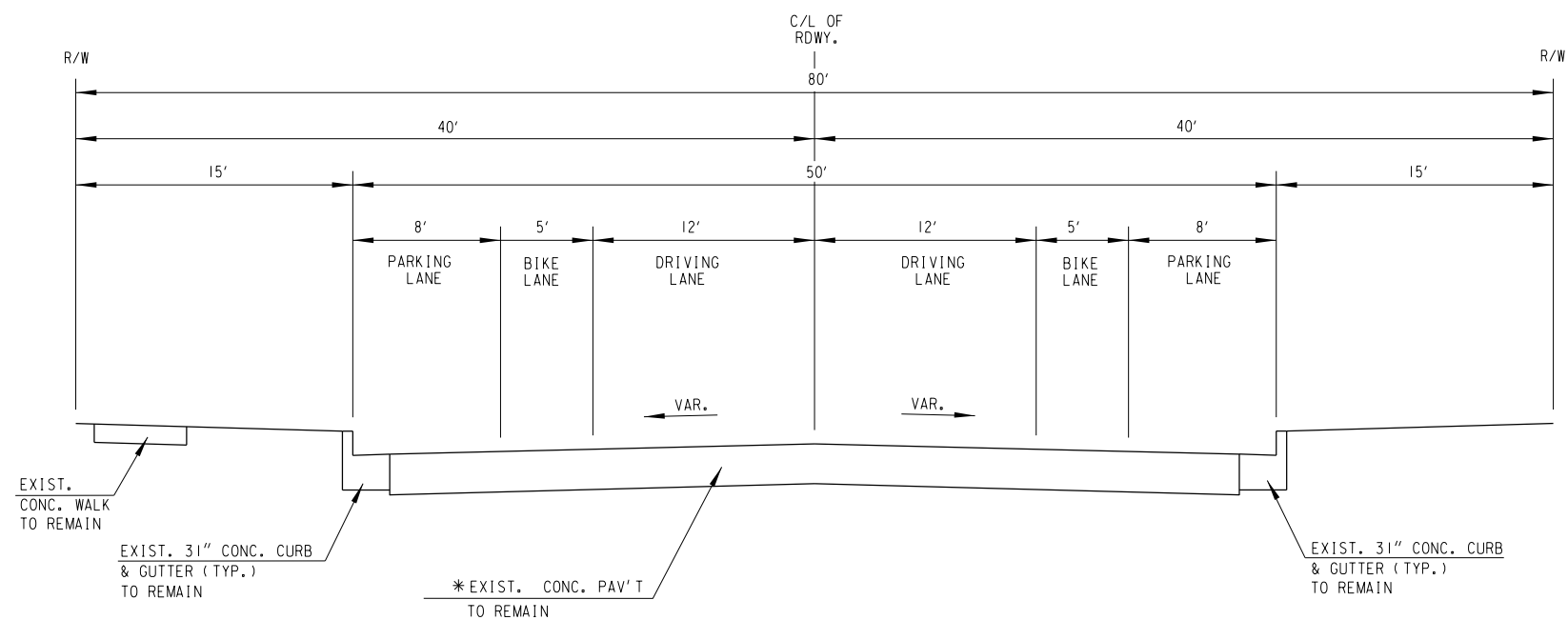


* WHERE THERE IS NO EXISTING BASE

TYPICAL FINISHED SECTION
SOUTH WATER STREET
 STA. 00+27.2 TO STA. 05+65.0 TO STA. AND 11+65.0 TO 13+50.0
 EAST WASHINGTON STREET TO EAST NATIONAL AVENUE
 (LOOKING NORTH)

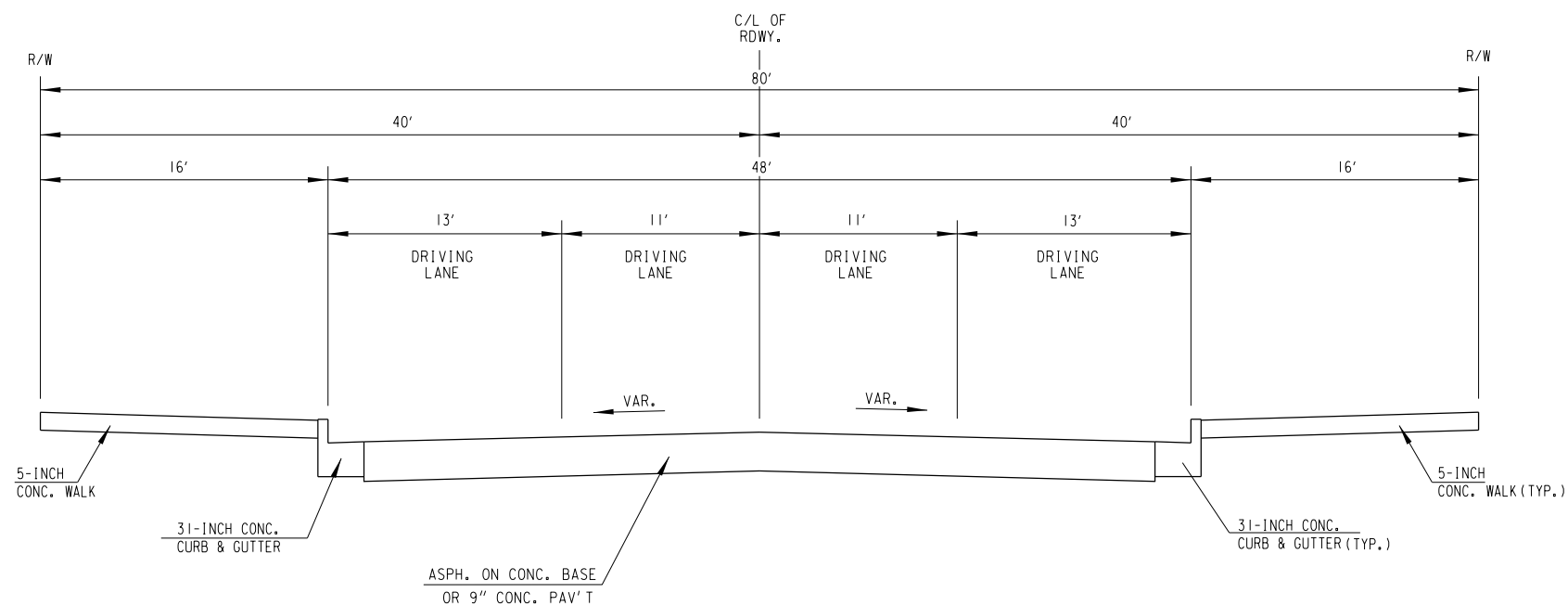


TYPICAL EXISTING SECTION
SOUTH WATER STREET
EAST NATIONAL AVENUE TO EAST PITTSBURGH AVENUE

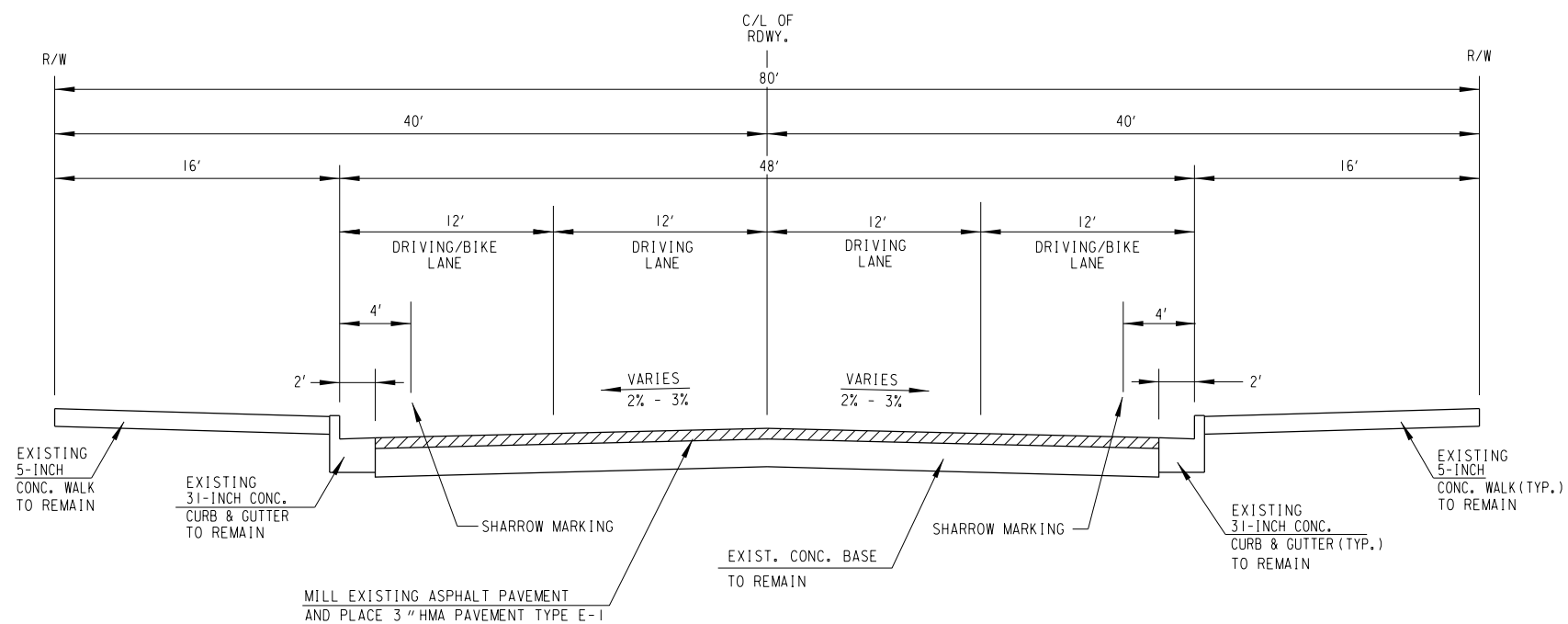


* PAVEMENT WILL BE PARTIALLY REPAIRED
OR RESTORED AS SHOWN ON PLAN

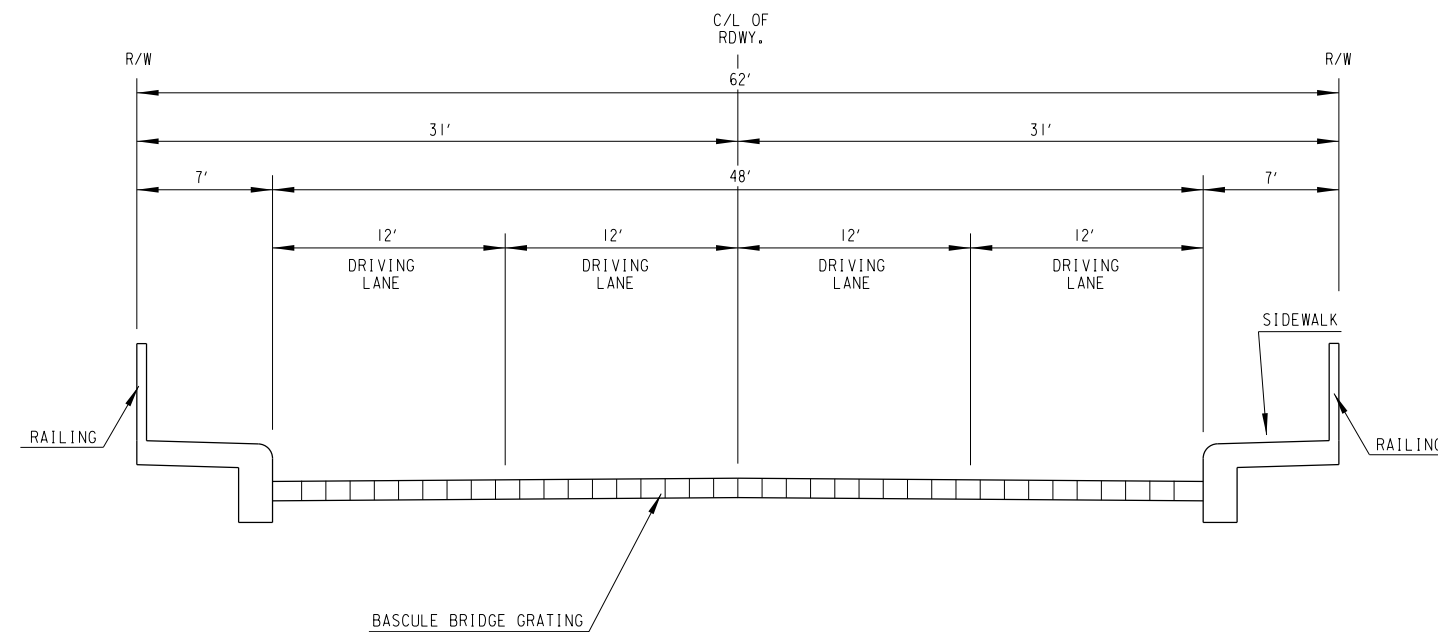
TYPICAL FINISHED SECTION
(PAVEMENT MARKING)
SOUTH WATER STREET
EAST NATIONAL AVENUE TO EAST PITTSBURGH AVENUE



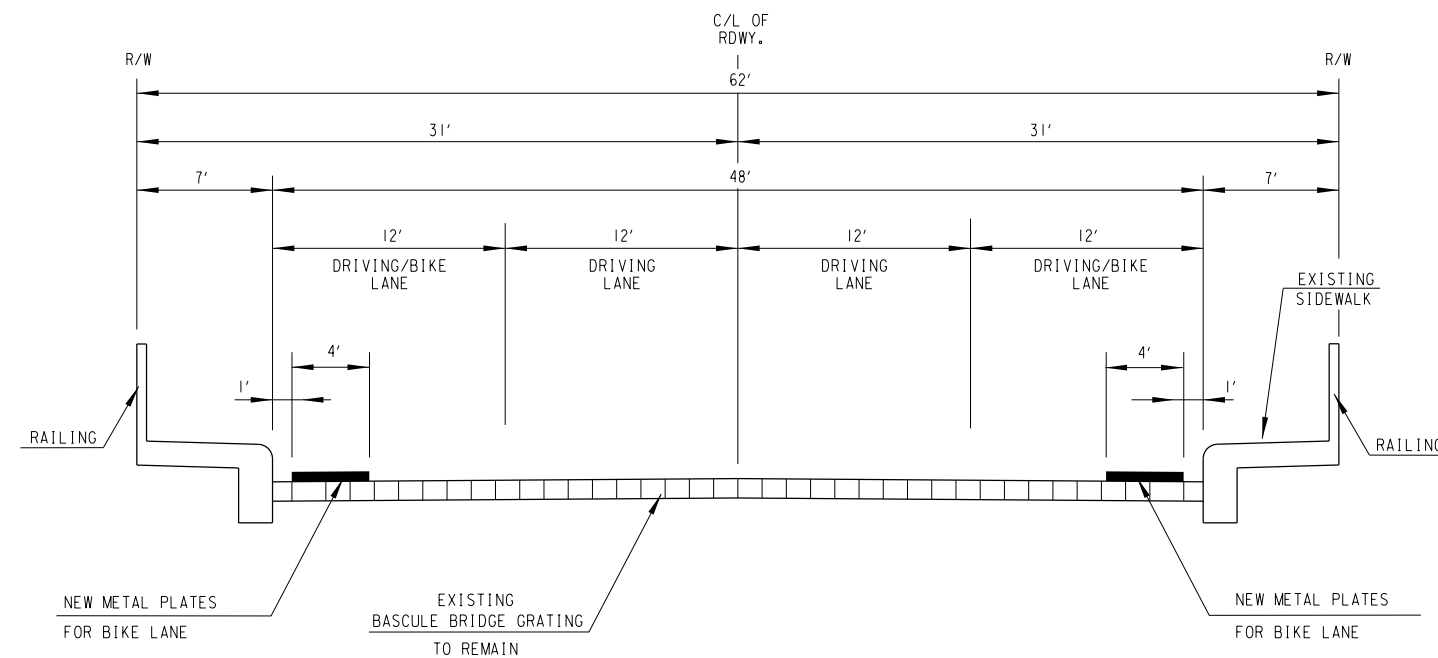
TYPICAL EXISTING SECTION
EAST PITTSBURGH AVENUE & NORTH BROADWAY (STH 32)
SOUTH WATER STREET TO EAST ERIE STREET



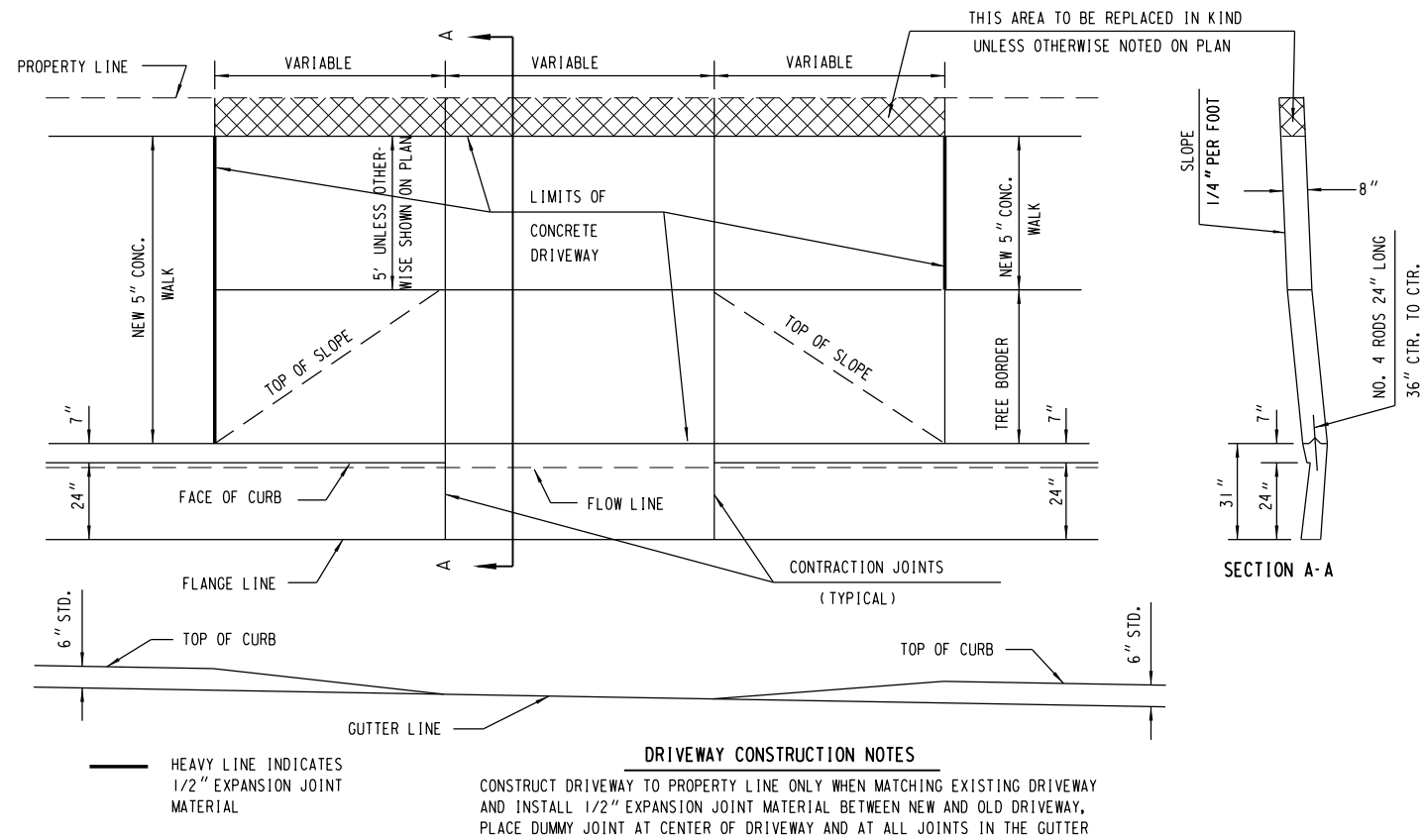
TYPICAL FINISHED SECTION
EAST PITTSBURGH AVENUE & NORTH BROADWAY (STH 32)
SOUTH WATER STREET TO EAST ERIE STREET



TYPICAL EXISTING SECTION
NORTH BROADWAY/ BASCULE BRIDGE OVER MILWAUKEE RIVER

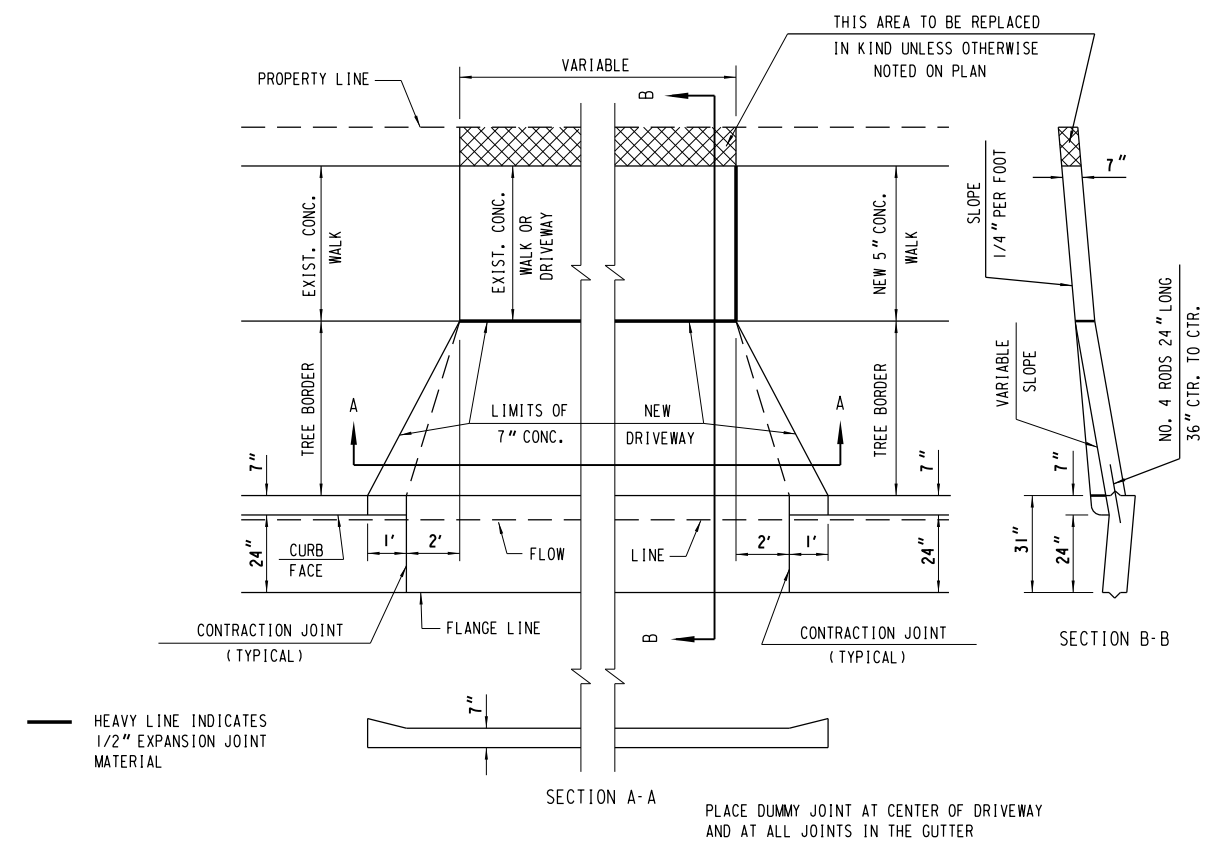


TYPICAL FINISHED SECTION
NORTH BROADWAY/ BASCULE BRIDGE OVER MILWAUKEE RIVER



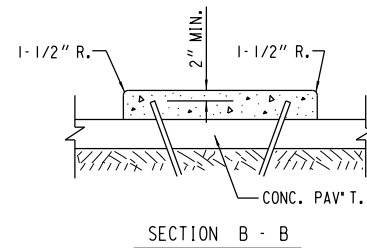
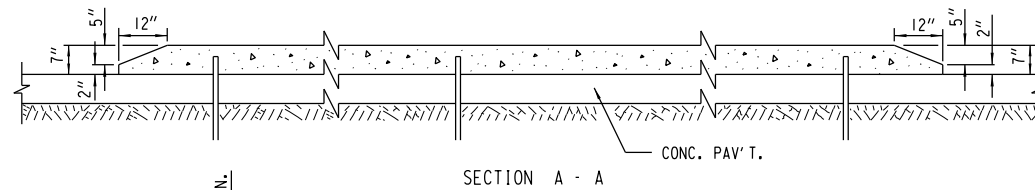
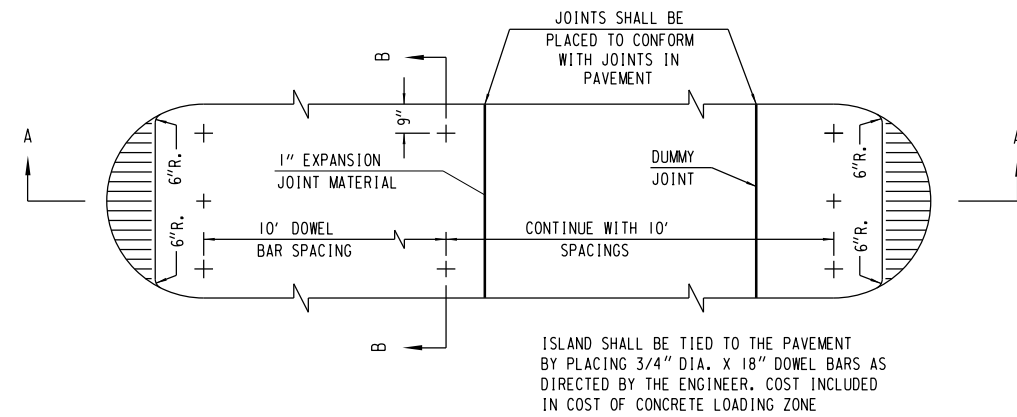
DEPRESSED CONCRETE DRIVEWAY (MODIFIED) 8-INCH

(F)



FLARED CONCRETE DRIVEWAY (MODIFIED) 7-INCH

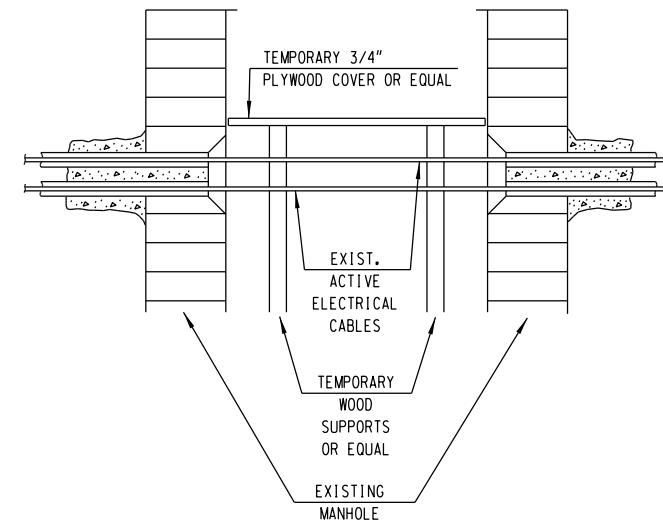
(E)



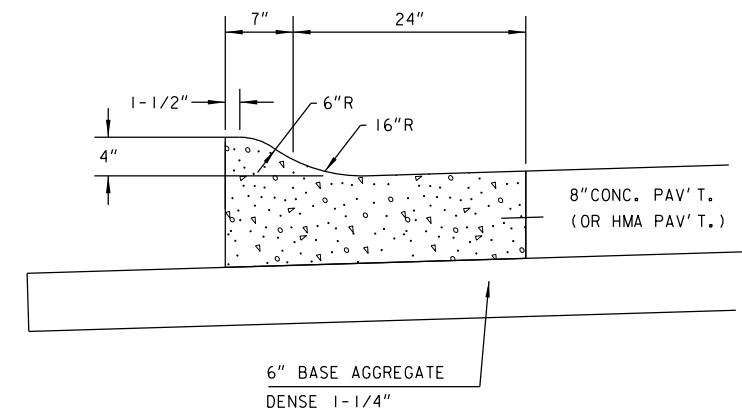
NOTE :
SIZE AND LOCATION OF CITY OF MILWAUKEE
ELECTRICAL SERVICES BOXOUTS IN CONCRETE
ISLANDS ON BASE TO BE DETERMINED IN FIELD
AT THE TIME OF CONSTRUCTION

CONCRETE LOADING ZONE
(WITH SNOWPLOWABLE NOSE)

ADJUSTING TES MANHOLE COVERS

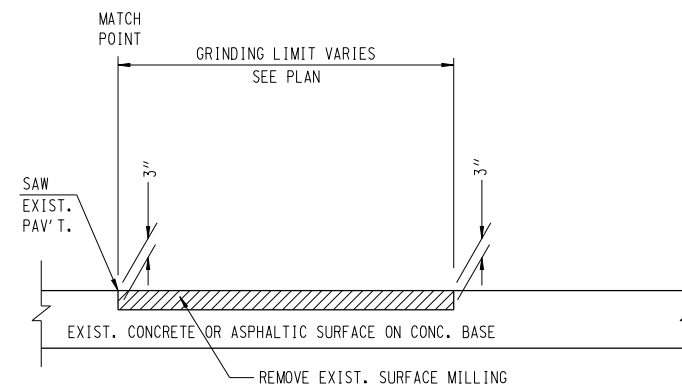


BLOCK OR BRICK ROUND MANHOLE



MOUNTABLE CONCRETE CURB & GUTTER 31"

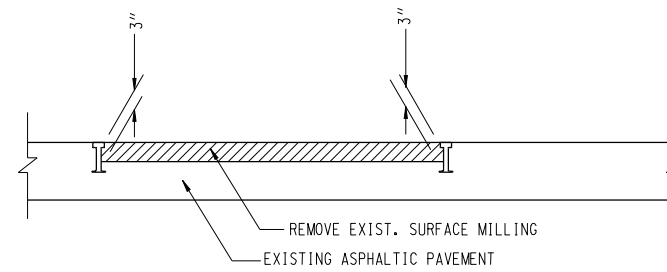
(AM)



ASPHALTIC SURFACE BUTT JOINTS/REMOVING ASPHALTIC SURFACE MILLING

IN ROADWAY AT INTERSECTIONS AND ABUTTING PAVEMENT

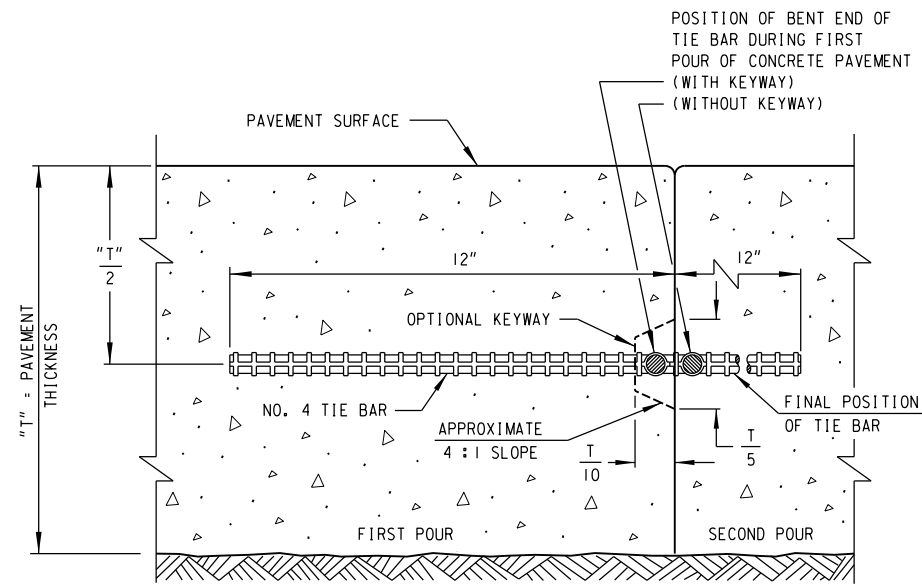
① ②



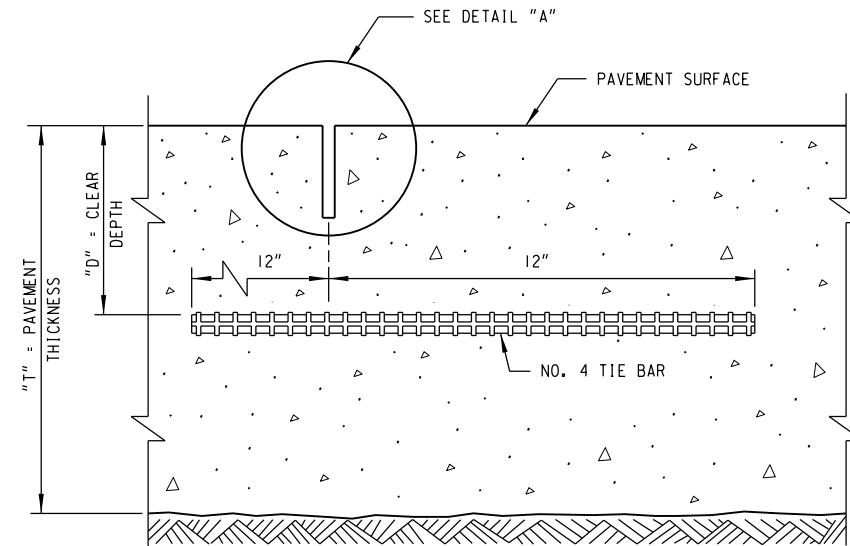
REMOVING ASPHALTIC SURFACE MILLING

③

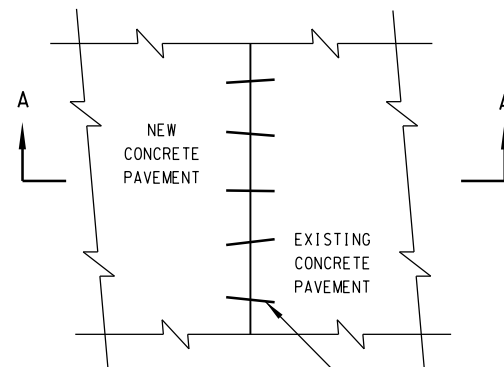
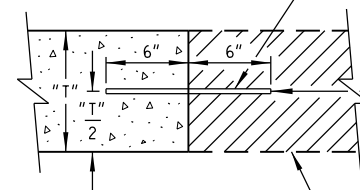
LONGITUDINAL JOINT WITH HOT POURED SEALANT



CONSTRUCTION JOINT



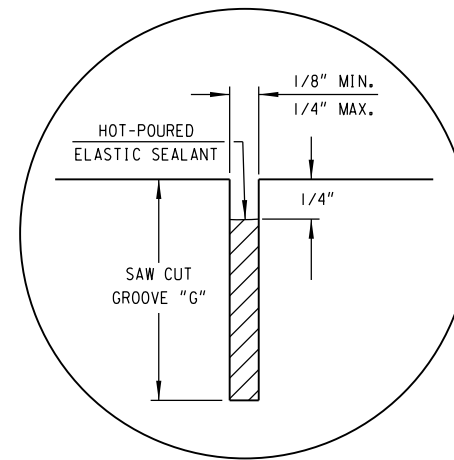
SAWED JOINT

PLAN VIEW
LONGITUDINAL JOINTSECTION A-A
PAVEMENT TIES

NO. 6 TIE BARS
SPACED 3'-0" C.-C.
INSTALLED ON 6:1 SKEW
HORIZONTALLY. DIRECTION
OF SKEW ALTERNATING AFTER
EVERY ONE OR TWO BARS.

THE HOLE FOR THE BAR SHALL
BE DRILLED TO A DEPTH OF
7" AND TO SUCH A DIAMETER
AS TO PROVIDE A TIGHT
DRIVEN FIT.

EXIST. CONC.
PAVEMENT



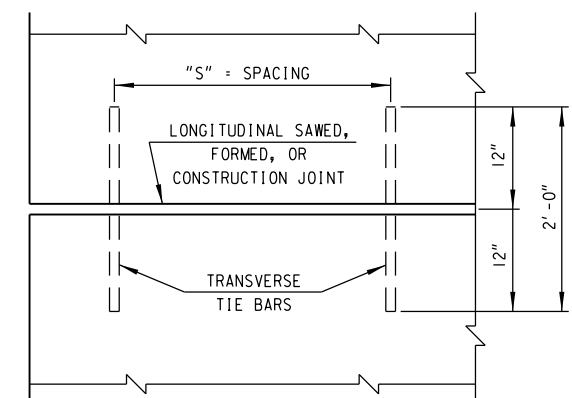
DETAIL "A"

PAVEMENT THICKNESS "T"	CLEAR DEPTH "D"	SAW CUT GROOVE "G"	MAXIMUM TIE BAR SPACING "S"	
			PAVEMENT WIDTH	
			LESS THAN 30'	30' OR MORE
6"	3" ± 1/2"	1-1/2"	48"	42"
7"	3-1/4" ± 1"	1-3/4"	45"	36"
8"	3-3/4" ± 1"	2"	39"	30"
9"	4-1/4" ± 1"	2-1/4"	33"	27"
10"	4-3/4" ± 1"	2-1/2"	30"	24"
11"	5-1/4" ± 1"	2-3/4"	27"	21"
12"	5-3/4" ± 1"	3"	24"	21"

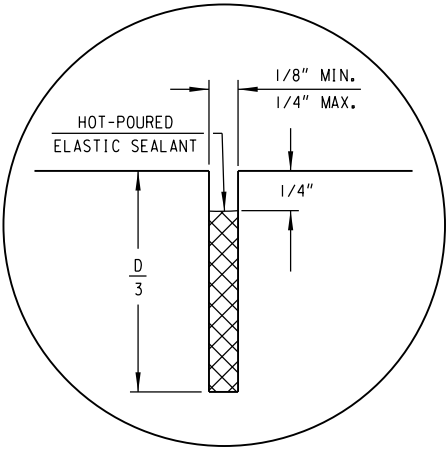
GENERAL NOTES

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

TIE BARS AND PAVEMENT TIES SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.

PLAN VIEW
SHOWING LOCATION OF TIE BARS

TRANSVERSE NON-DOWELED, NON-REINFORCED CONCRETE PAVEMENT JOINTS



DETAIL "A"

PAVEMENT DEPTH AND JOINT SPACING TABLE	
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6"	12'
7"	14'
8"	15'
9"	15'
10" & ABOVE	18'

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

CONTRACTION JOINTS

CONTRACTION JOINTS SHALL BE LOCATED AT A UNIFORM SPACING SHOWN IN TABLE. EXCEPTIONS SHALL BE AS DIRECTED BY THE ENGINEER.

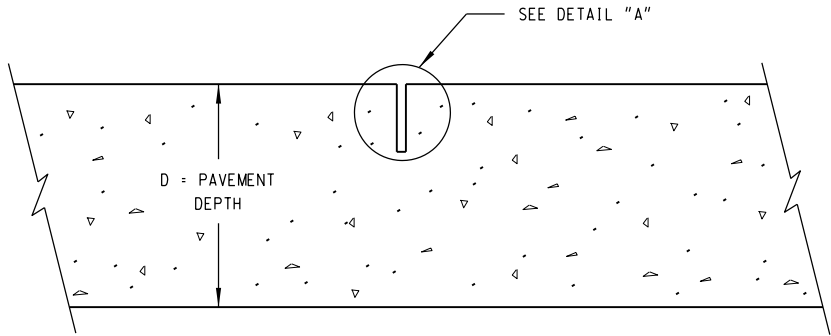
THE SAWCUT SHALL BE TO THE DEPTH OF D/3 AND THE WIDTH OF 1/8 INCH MIN. & 1/4 INCH MAX.

CONSTRUCTION JOINTS

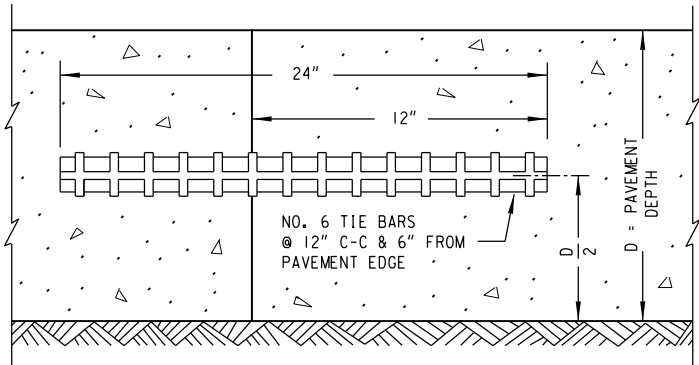
CONSTRUCTION JOINTS MAY BE LOCATED IN ANY PANEL AND BE A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT. CONSTRUCTION JOINTS MAY BE CONSTRUCTED EITHER PARALLEL TO CONTRACTION JOINTS OR AT 90° TO THE CENTERLINE.

TIE BARS MAY BE INSERTED THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN POURED.

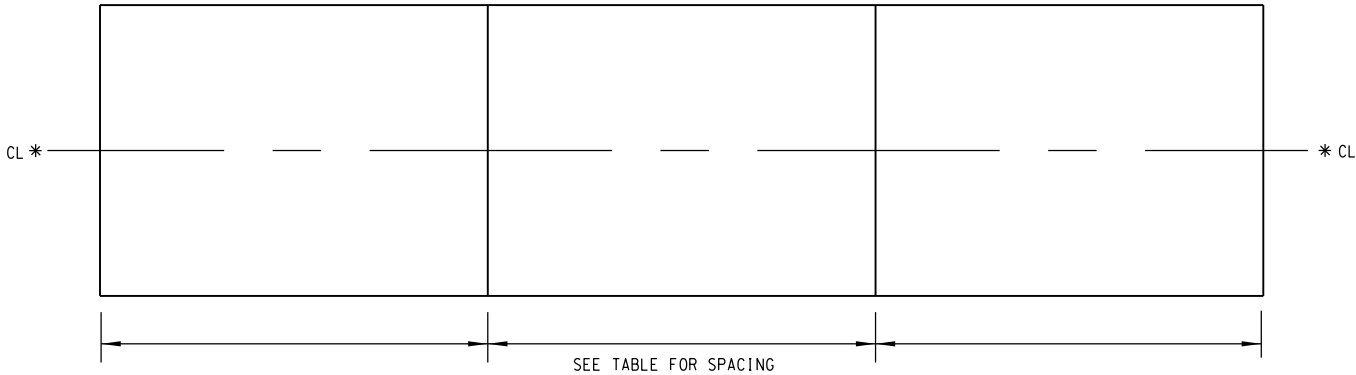
TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



CONTRACTION JOINT

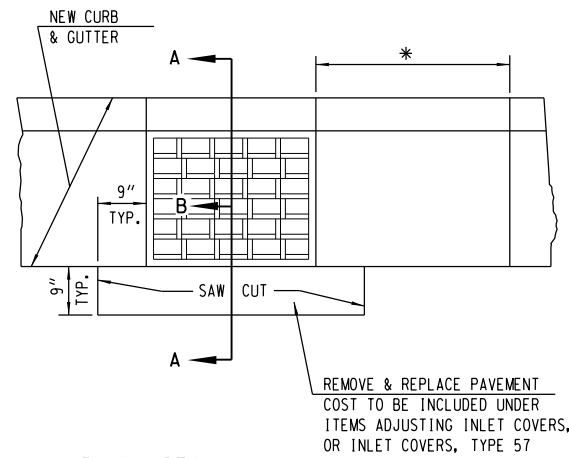


CONSTRUCTION JOINT

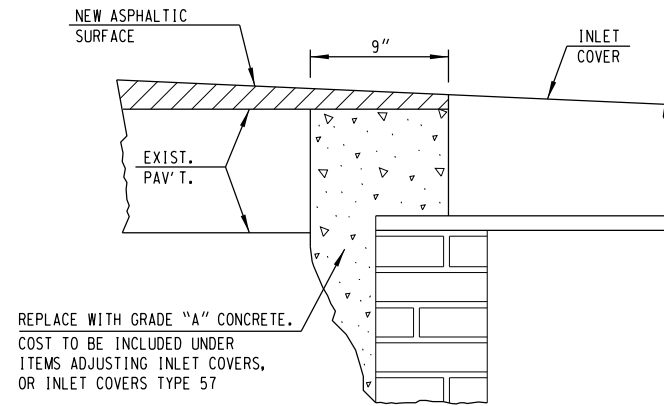


CONTRACTION JOINT LOCATIONS

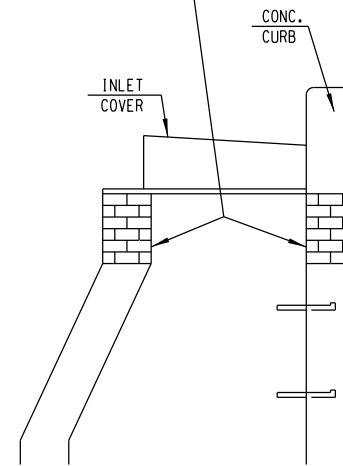
* REMOVE 3'-0" CURB & GUTTER MIN. OR TO THE NEAREST JOINT, 6'-0" MAX. UNLESS OTHERWISE DIRECTED ON THE PLAN.



PLAN VIEW



SECTION A-B



SECTION A-A

ADJUSTING INLET COVERS

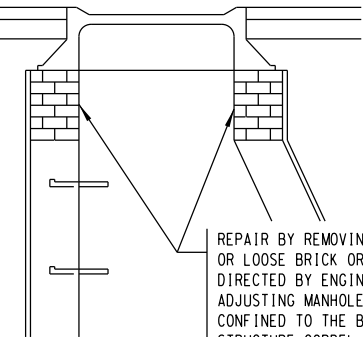
REPLACE WITH CONCRETE
COST TO BE INCLUDED UNDER ITEMS
ADJUSTING MANHOLE COVERS, OR
MANHOLE COVERS TYPE 58 OR TYPE 58A

NEW UPPER
LAYER

NEW LOWER
LAYER

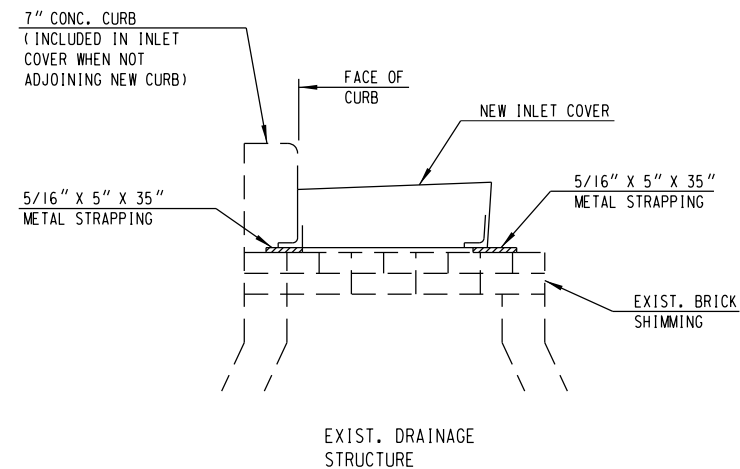
EXIST. CONC. PAV'T.

PAVEMENT REMOVAL COST
TO BE INCLUDED UNDER ITEMS
ADJUSTING MANHOLE COVERS
OR MANHOLE COVERS TYPE 58
OR TYPE 58A



REPAIR BY REMOVING & REPLACING DAMAGED OR LOOSE BRICK OR BLOCK TO DEPTH AS DIRECTED BY ENGINEER. WORK UNDER ADJUSTING MANHOLE COVERS SHALL BE CONFINED TO THE BRICK SHIMMING ABOVE THE STRUCTURE CORBEL. THIS SHIMMING SHALL NOT EXCEED 1 FOOT BETWEEN THE TOP OF THE CORBEL AND THE FRAME BOTTOM. ANY WORK MORE EXTENSIVE THAN DESCRIBED IMMEDIATELY ABOVE SHALL BE CONSTRUED AS WORK UNDER RECONSTRUCTING MANHOLES. DEPTHS OF BRICKWORK TO BE REPAIRED, AS INDICATED ON THE PLAN, ARE ESTIMATES ONLY AND MAY VARY AT TIME OF CONSTRUCTION.

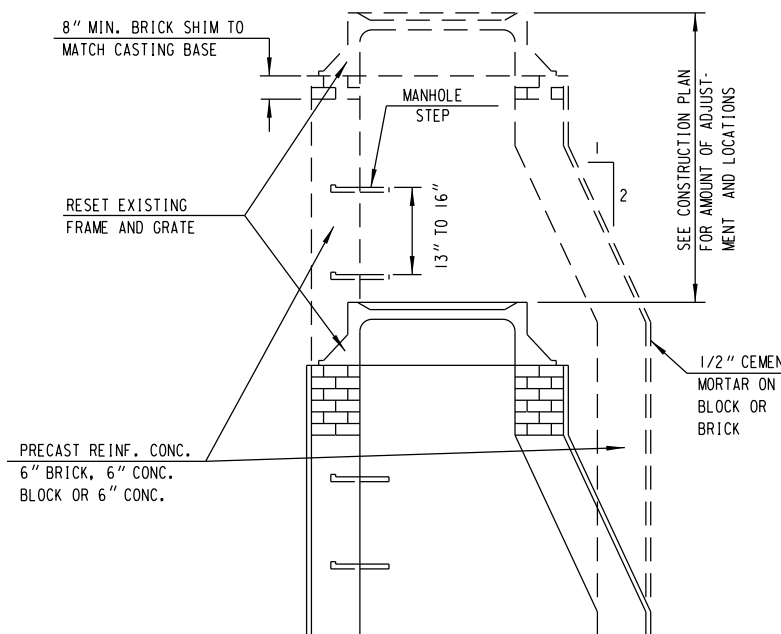
ADJUSTING MANHOLE COVERS OR
MANHOLE COVERS TYPE 58 OR TYPE 58A



NOTES:

1. METAL STRAPPING TO BE 5/16" X 5" X 35" FLAT STEEL, HOT ROLLED (ASTM A36).
2. METAL STRAPPING TO BE PLACED ACROSS EXISTING DRAINAGE STRUCTURE TO SUPPORT NEW COVER. THE METAL STRAPPING SHALL BE SET ON A BED OF MORTAR.
3. PRECAST CONCRETE FLAT SLAB TOPS MAY BE USED ON THE STRUCTURE. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.
4. COST OF MATERIALS AND LABOR TO BE INCLUDED IN PRICE BID FOR INLET COVER, TYPE 57.

DETAIL FOR PLACING NEW INLET COVER ON EXISTING
INLET USING METAL STRAPPING MATERIALS



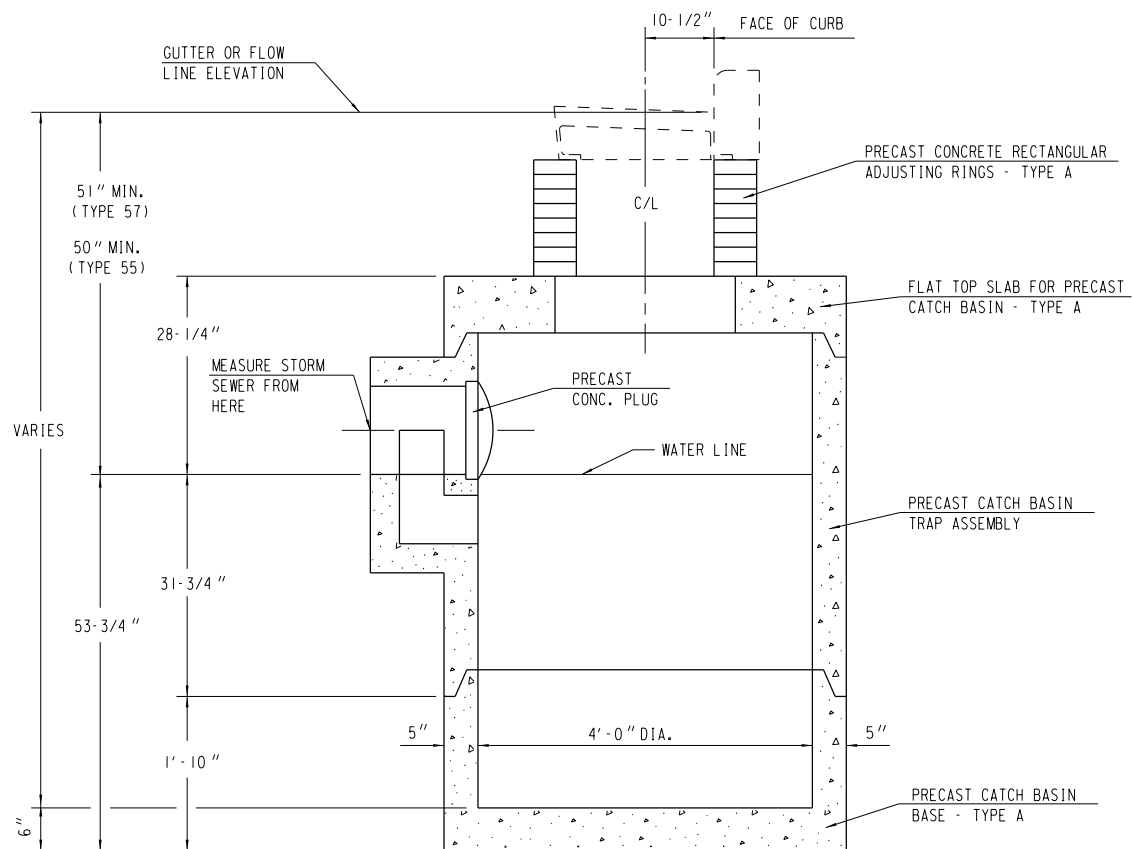
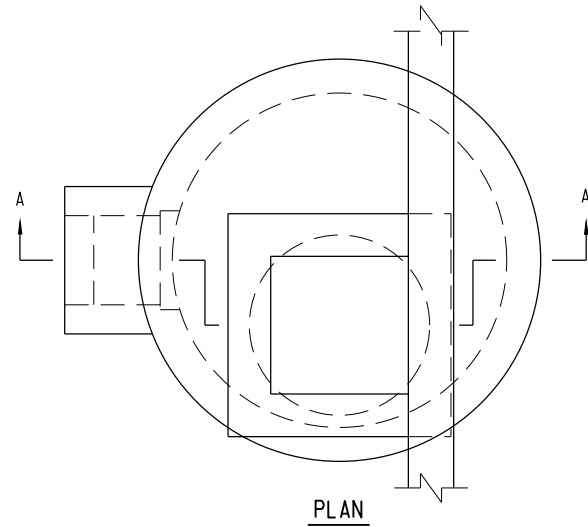
CORBEL MAY BE REVERSED
STRAIGHT SIDE LEANED
SLIGHTLY TO CLEAR CURB HEAD.

REPAIR BY REMOVING AND REPLACING
DAMAGED OR LOOSE BRICK OR BLOCK
TO THE DEPTH AS SHOWN ON THE
PLAN OR AS DIRECTED BY THE ENGINEER.
DEPTHS AS INDICATED ON PLAN ARE
ESTIMATES ONLY AND MAY VARY AT
TIME OF CONSTRUCTION.

RECONSTRUCTING MANHOLES
AND INLETS

CONSTRUCTION NOTES

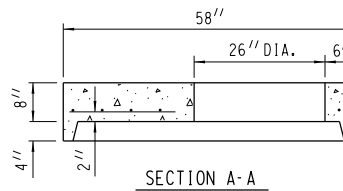
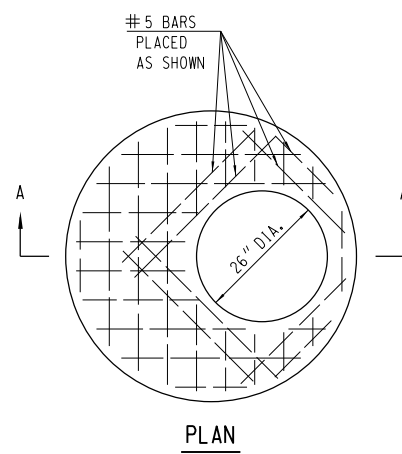
1. LOCATIONS OF STRUCTURES IN CURB & GUTTER SECTIONS REFER TO FACE OF CURB.
2. LOCATIONS OF STRUCTURES NOT IN CURB AND GUTTER SECTIONS REFER TO CENTERLINE OF STRUCTURE.
3. PIPE LENGTHS GIVEN ARE APPROXIMATE OUT TO OUT OF STRUCTURE.
4. GRATE & RIM ELEVATIONS ARE GIVEN AT FLOW LINE OF INLET COVER OR AT CENTERLINE OF MANHOLE COVER.
5. WHEN NEW COVERS ARE PLACED, THE FIRST 12" OF ADJUSTMENT OR REPAIRING SHALL BE INCLUDED IN THE COST OF THE NEW COVER. ANY ADJUSTMENT OR REPAIR OF BRICKWORK 12" OR LESS WILL BE PAID AS ADJUSTING COVERS WHEN RESETTING EXISTING COVERS, ANY ADJUSTMENT OR REPAIR OF BRICKWORK MORE THAN 12" WILL BE PAID AS A RECONSTRUCT.
6. MANHOLE ADJUSTMENTS IN ASPHALTIC PAVEMENT WILL BE MADE AFTER THE LOWER LAYER IS PLACED.
7. WHEN CONSTRUCTING CONCRETE CURB ADJACENT TO INLET COVER TYPE 57, TWO (2) DEFORMED TIE BARS SHALL BE PLACED LONGITUDINALLY THROUGH THE CURB SECTION AND EXTENDED ONE (1) FOOT BEYOND EACH SIDE OF THE FRAME. A DUMMY JOINT SHALL BE CUT IN THE CURB AT EACH SIDE OF THE FRAME.



SECTION A-A
CATCH BASIN - TYPE 44A

GENERAL NOTES

1. REINFORCEMENT FOR 5" PRECAST REINFORCED CONCRETE SHALL BE 6" X 6" W16 X W16 WELDED STEEL WIRE FABRIC AND SHALL BE EMBEDDED 2" CLEAR.
2. PRECAST INLET UNITS AND BASES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.
3. PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 4" IN DEPTH WHICH MEETS REQUIREMENTS FOR GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.
4. SET FRAME ELEVATION 0.03 FT. LOWER THAN ELEVATION INDICATED ON PLAN.
5. A PRECAST CONCRETE PLUG SHALL BE CEMENTED INTO THE OPENING AT THE INNER FACE OF THE CATCH BASIN TRAP ASSEMBLY.

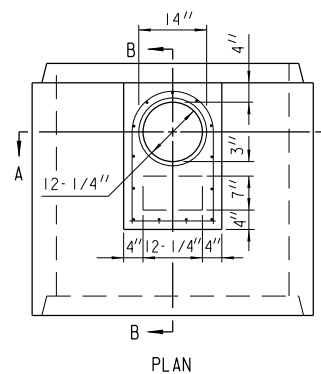
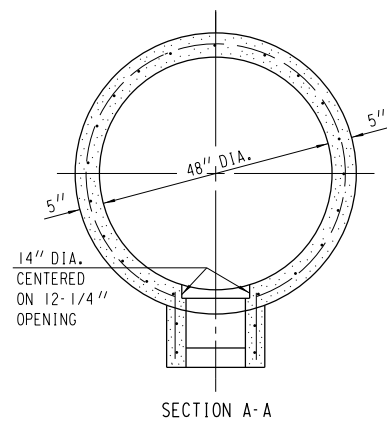


TOP SLAB - TYPE A

FLAT TOP SLAB SHALL BE 8" THICK REINFORCED WITH ONE LAYER OF STEEL WITH A MINIMUM AREA OF 0.12 SQ. IN. PER LINEAL FOOT IN BOTH DIRECTIONS, PLACED IN THE CENTER THIRD OF THE SECTION AS SHOWN.

REINFORCEMENT SHALL BE TIED OR WELDED TOGETHER.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 3300 P.S.I.



TRAP ASSEMBLY

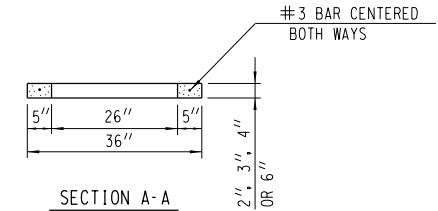
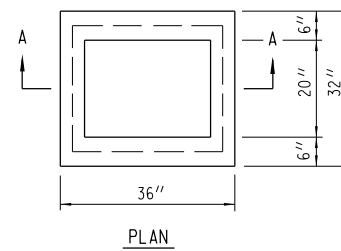
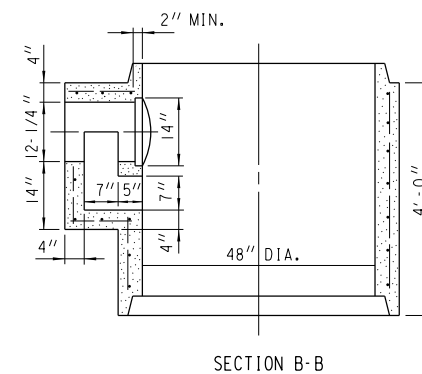
CIRCUMFERENTIAL REINFORCEMENT SHALL CONSIST OF ONE LINE OF STEEL NOT LESS THAN 0.12 SQ. IN. PER LINEAL FOOT, AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.

TRAP ASSEMBLY SHALL BE REINFORCED WITH ONE LAYER OF STEEL WITH A MINIMUM AREA OF 0.12 SQ. IN. PER LINEAL FOOT IN BOTH DIRECTIONS, PLACED IN THE CENTER THIRD OF THE SECTION AS SHOWN.

CIRCUMFERENTIAL AND TRAP ASSEMBLY REINFORCEMENT SHALL BE TIED OR WELDED TOGETHER.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 3300 P.S.I.

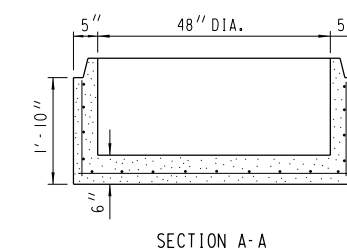
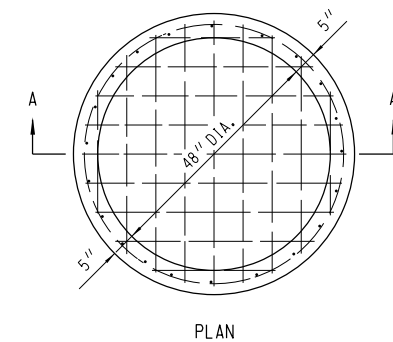
TWO HANDLING HOLES 2 1/4 INCHES IN DIAMETER SHALL BE CAST OR DRILLED IN THE WALL.



RECTANGULAR ADJUSTING RING - TYPE A

THE ADJUSTING RINGS SHALL BE 2", 3", 4" OR 6" IN HEIGHT.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 3300 P.S.I.



BASE - TYPE A

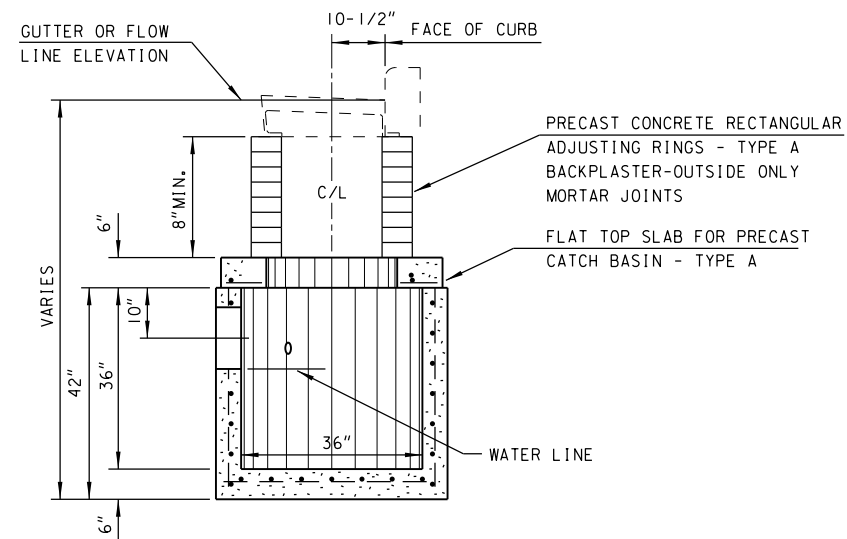
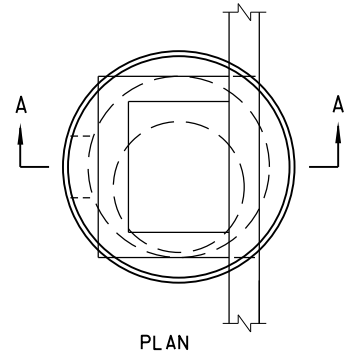
CIRCUMFERENTIAL REINFORCEMENT SHALL CONSIST OF ONE LINE OF STEEL NOT LESS THAN 0.12 SQ. IN. PER LINEAL FOOT, AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.

BOTTOM SLAB SHALL BE REINFORCED WITH ONE LAYER OF STEEL WITH A MINIMUM AREA OF 0.12 SQ. IN. PER LINEAL FOOT IN BOTH DIRECTIONS, PLACED IN THE CENTER THIRD OF THE SLAB.

CIRCUMFERENTIAL AND BOTTOM SLAB REINFORCEMENT SHALL BE TIED OR WELDED TOGETHER.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 3300 P.S.I.

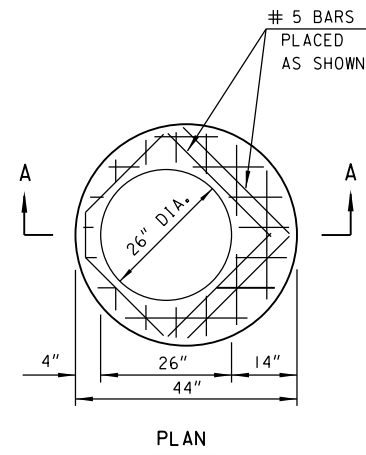
TWO HANDLING HOLES 2 1/4 INCHES IN DIAMETER SHALL BE CAST OR DRILLED IN THE WALL.



SECTION A-A

CATCH BASIN - TYPE 45A**GENERAL NOTES**

1. PRECAST INLET UNITS AND BASES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199 AND ASTM DESIGNATION C-478 AND THESE DETAILED REQUIREMENTS WHICH SHALL GOVERN WHERE THEY ALTER THE AASHTO AND ASTM STANDARDS.
2. ALL REINFORCEMENT STEEL SHALL BE GRADE 60 OR GREATER AND EMBEDDED AT LEAST 1" CLEAR.
3. PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 4" IN DEPTH WHICH MEETS REQUIREMENTS FOR GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.
4. SET FRAME ELEVATION 0.03 FT. LOWER THAN ELEVATION INDICATED ON PLAN.



SECTION A-A

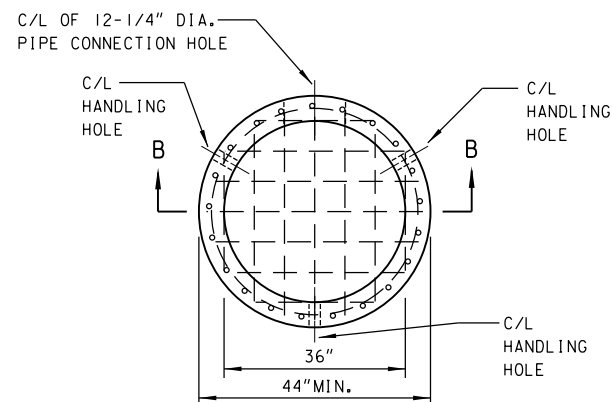
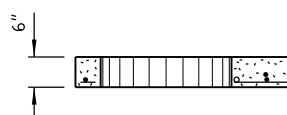
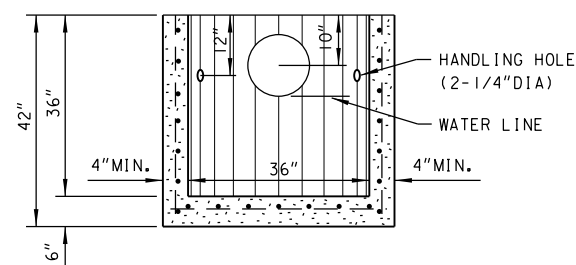
TOP SLAB - TYPE A

FLAT TOP SLAB SHALL BE 6" THICK REINFORCED WITH ONE LAYER OF STEEL WITH A MINIMUM AREA OF 0.32 SQ. IN. PER LINEAL FOOT IN BOTH DIRECTIONS, PLACED NEAR THE BOTTOM OF THE SLAB WITH 1" CLEAR COVER.

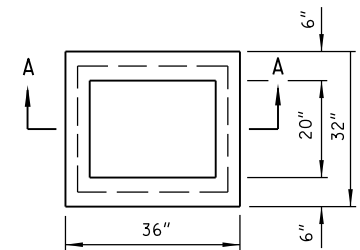
ADDITIONALLY, NO. 5 BARS SHALL BE PLACED AROUND TOP SLAB OPENING AS SHOWN.

REINFORCEMENT SHALL BE TIED OR WELDED TOGETHER.

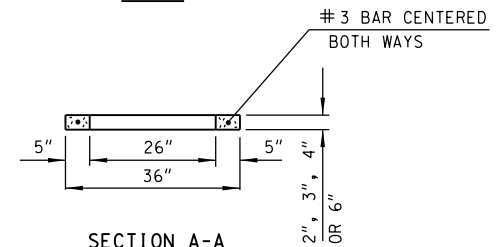
THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 4000 P.S.I.

**RISER SECTION WITH INTEGRAL BASE PLAN**

SECTION B-B



PLAN



SECTION A-A

RECTANGULAR ADJUSTING RING - TYPE A

THE ADJUSTING RINGS SHALL BE 2", 3", 4" OR 6" IN HEIGHT.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 3300 P.S.I.

CIRCUMFERENTIAL AND LONGITUDINAL REINFORCEMENT IN THE RISER SECTION SHALL EACH CONSIST OF ONE LAYER OF STEEL NOT LESS THAN 0.12 SQ. IN. PER FOOT AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.

THE BASE SLAB SHALL BE REINFORCED WITH ONE LAYER OF STEEL WITH A MINIMUM AREA OF 0.32 SQ. IN. PER FOOT IN BOTH DIRECTIONS, PLACED ABOVE THE MIDPOINT OF THE SLAB.

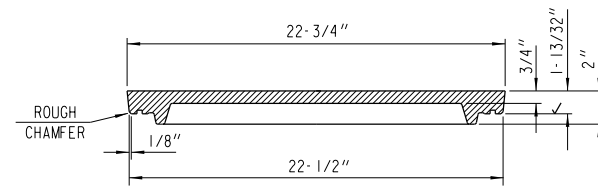
RISER SECTION AND BASE SLAB REINFORCEMENT SHALL BE TIED OR WELDED TOGETHER.

TWO TO THREE HANDLING HOLES 2-1/4" IN DIAMETER AND A PIPE CONNECTION HOLE 12-1/4" IN DIAMETER SHALL BE CAST OR CORED IN THE RISER SECTION AT THE LOCATIONS SHOWN. LIFTING DEVICES MAY BE SUBSTITUTED FOR HANDLING HOLES.

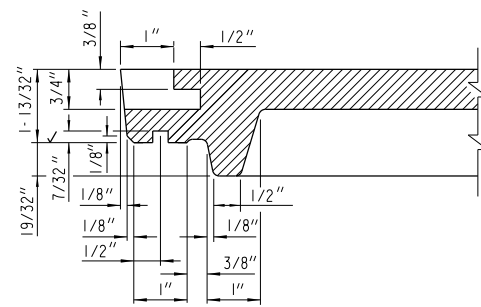
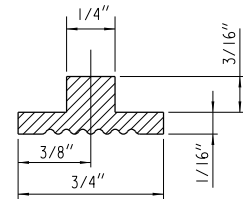
NO JOINTS OR HOLES SHALL BE BELOW THE WATERLINE.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 4000 P.S.I.

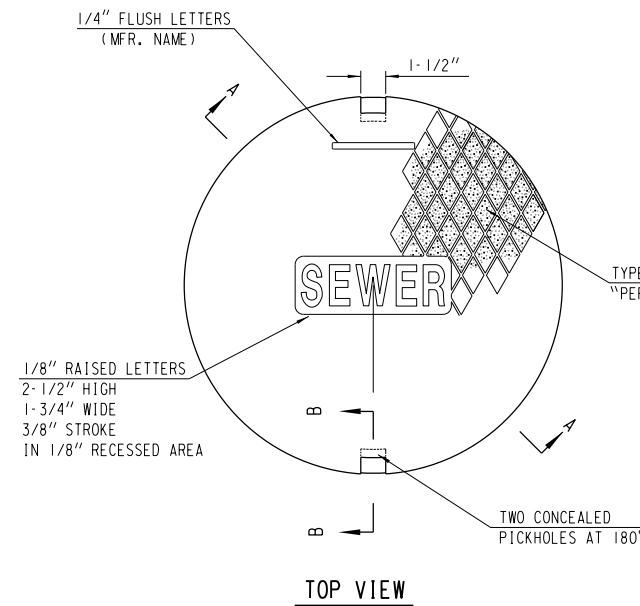
RISER SECTION MAY TAPER TO A 33" INTERNAL DIAMETER AT IT'S BOTTOM PROVIDED A 44" MINIMUM OUTSIDE DIAMETER IS MAINTAINED.



SECTION A-A



SECTION B-B



TOP VIEW

MANHOLE COVER - TYPE 58-A

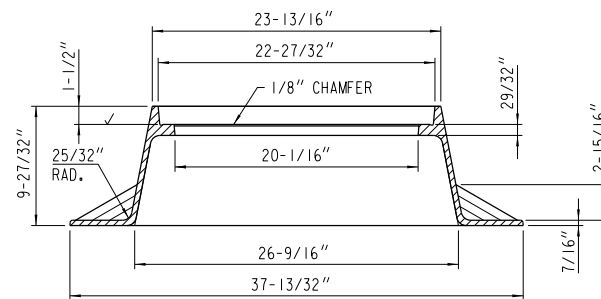
LID - 107 LBS.

AS CAST "T"-SEAL GROOVE IN
LID SEAT FOR OIL-RESISTANT
GASKET, NITRILE (60 DURO)

TYPE "C" LID DESIGN WITH
"PERMA-GRIP" TEXTURE

1" MACHINED

BOTTOM VIEW



MANHOLE FRAME - TYPE MS21

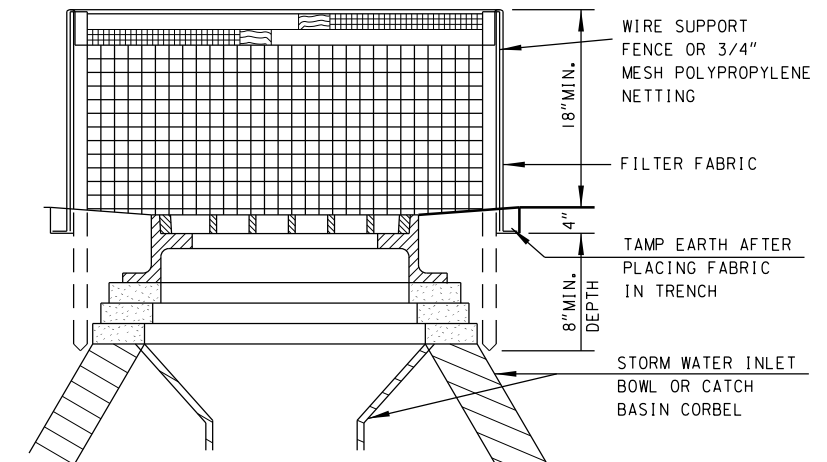
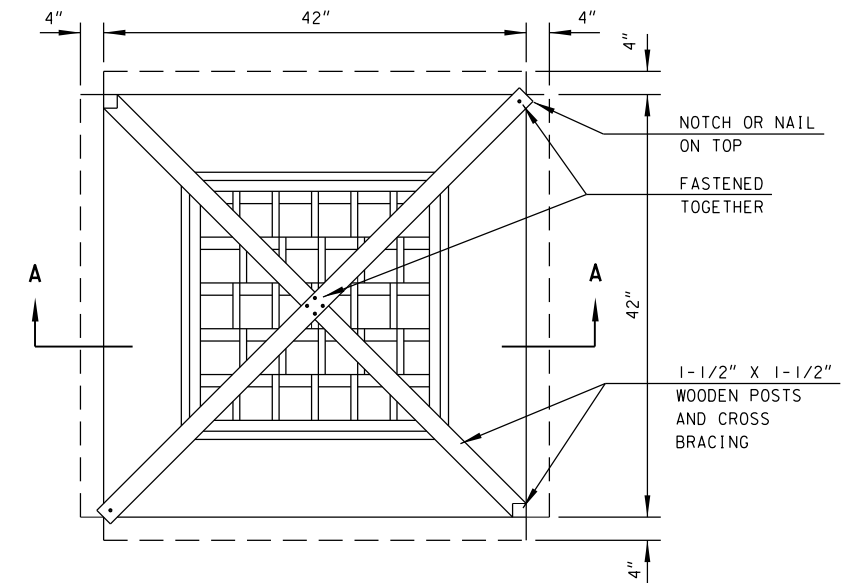
FRAME - 182 LBS.

NOTE:

ALL CASTINGS SHALL BEAR THE FOLLOWING
IDENTIFICATION MARKS IN THE FORM OF LEGIBLE
LETTERS OR NUMERALS RAISED 1/8" HAVING A
DIGIT OR LETTER HEIGHT OF ONE INCH ON
LOWER FACE OF LID:

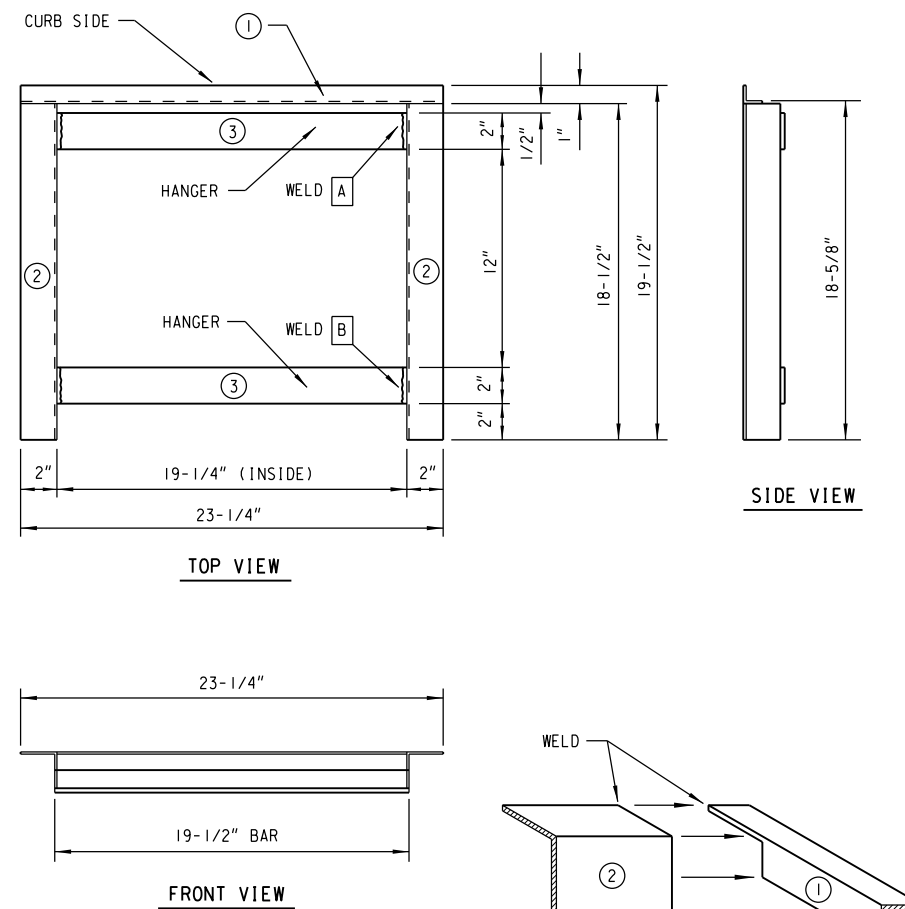
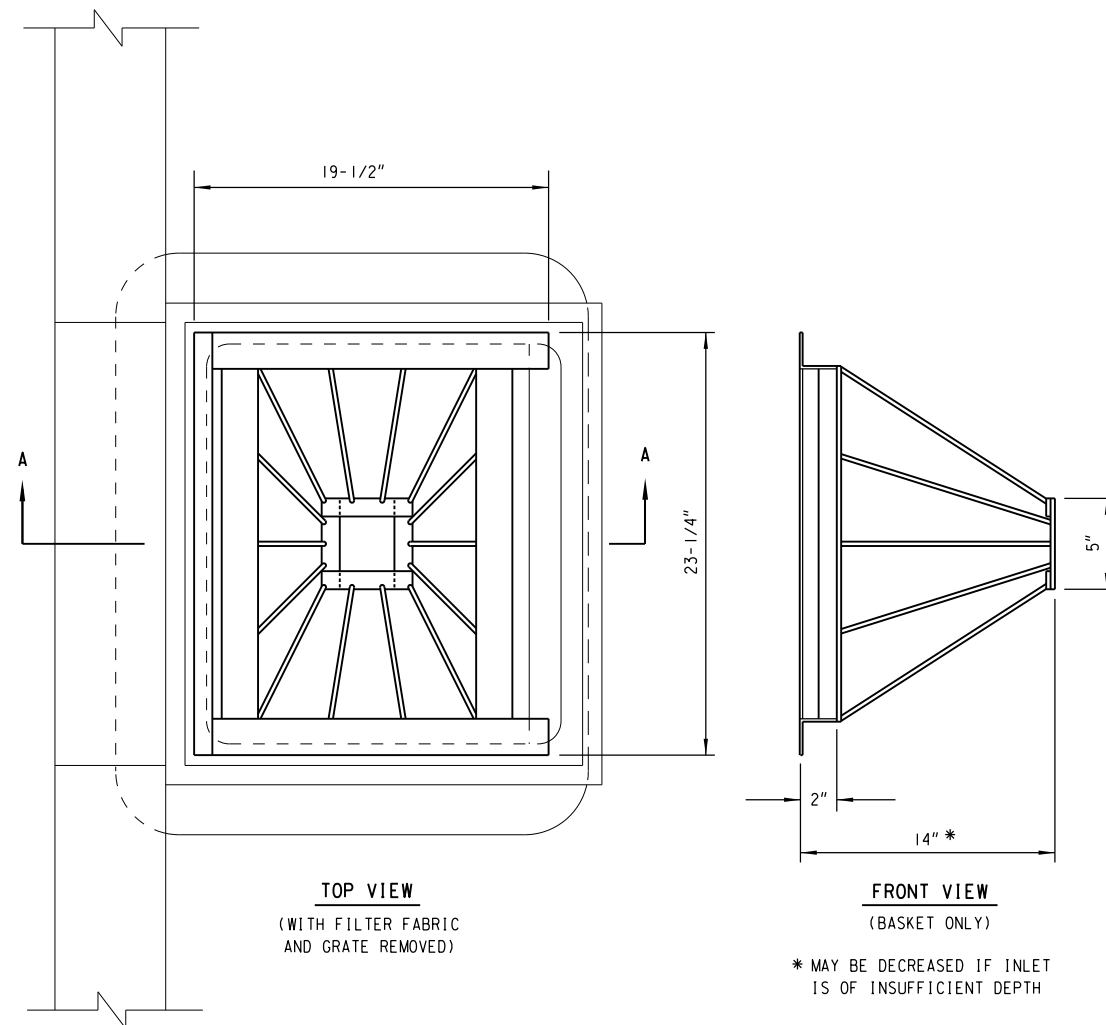
1. THE INITIALS OR MONOGRAM OF THE
FOUNDRY.
2. THE CONTRACT NUMBER AND YEAR MADE.
3. THE CASTING IDENTIFICATION NUMBER.
4. THE SERIAL NUMBER OF THE INDIVIDUAL
CASTING.

NOTE: ALL EXTERIOR EDGES SHALL BE GROUND.

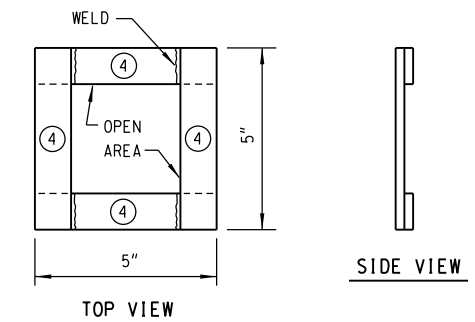


SECTION A-A

INLET SCREEN
(NOT PAVED) (TYPE R)

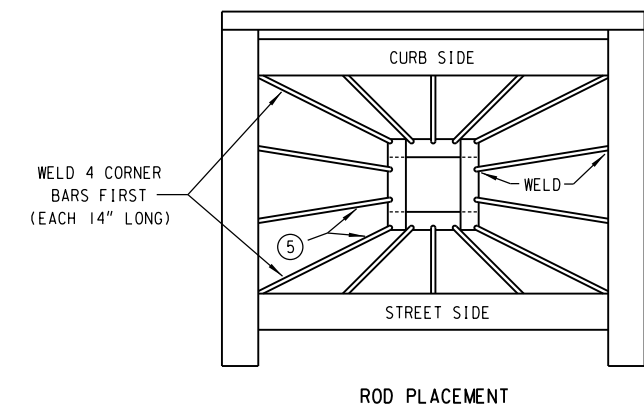


BAR SCHEDULE					
NO.	SHAPE	SIZE	THICKNESS	LENGTH	QUANTITY
①	ANGLE	1" X 1"	1/8"	23-1/4"	1
②	ANGLE	2" X 2"	1/8"	18-1/2"	2
③	BAR	2"	1/4"	19-1/2"	2

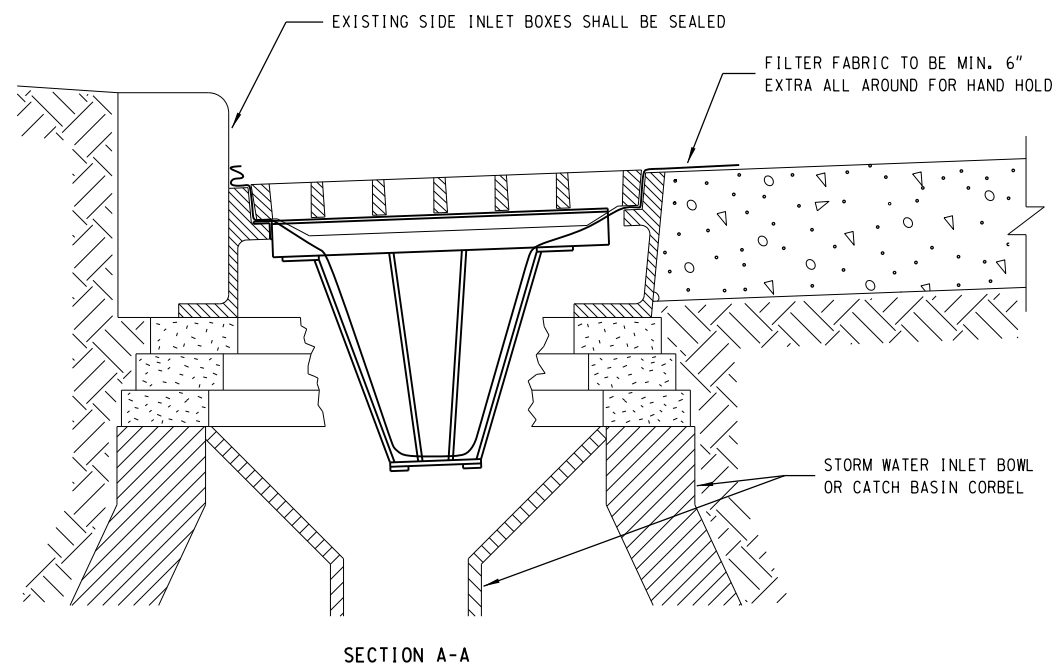


BAR SCHEDULE					
NO.	SHAPE	SIZE	THICKNESS	LENGTH	QUANTITY
④	BAR	1"	1/4"	5"	4

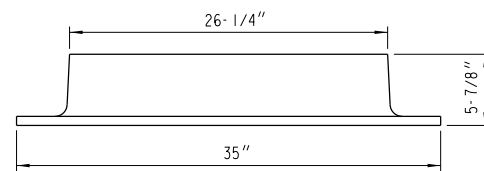
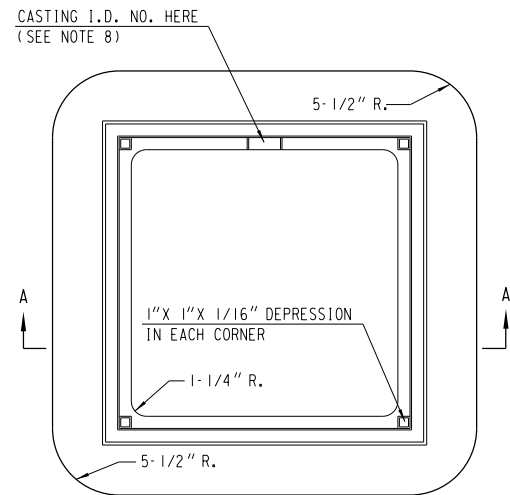
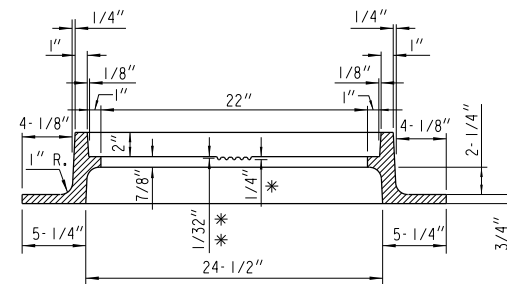
BASKET BOTTOM



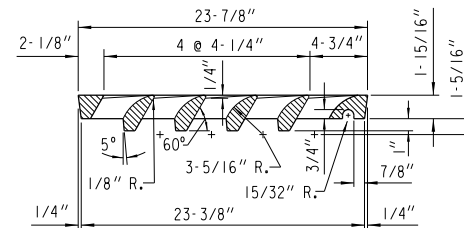
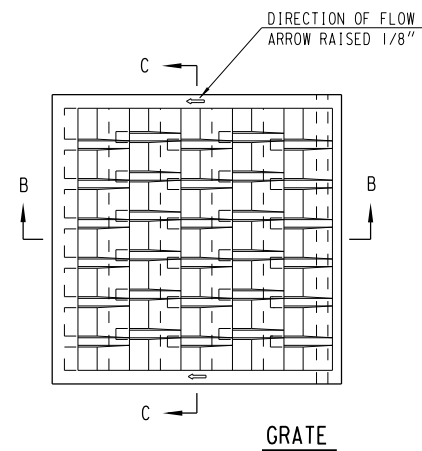
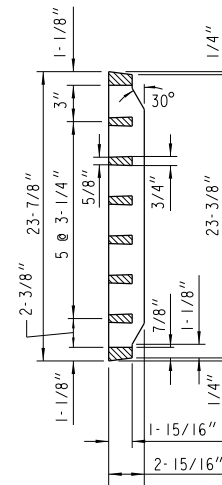
ROD SCHEDULE					
NO.	SHAPE	SIZE	THICKNESS	LENGTH	QUANTITY
⑤	ROD	1/4" MIN.	1/8"	12" TO 14" (CUT TO FIT)	14



TYPE M
INLET / CATCH BASIN BASKET

FRAME

- * DEPRESSION FOR LETTERS
* * CLEARANCE FROM TOP OF
LETTERS TO FACE OF SEAT

SECTION A-ASECTION B-BSECTION C-CINLET COVER - TYPE 55

LID-180 LBS., FRAME-315 LBS.

GENERAL NOTES

ALL EDGES ARE TO BE GROUND.

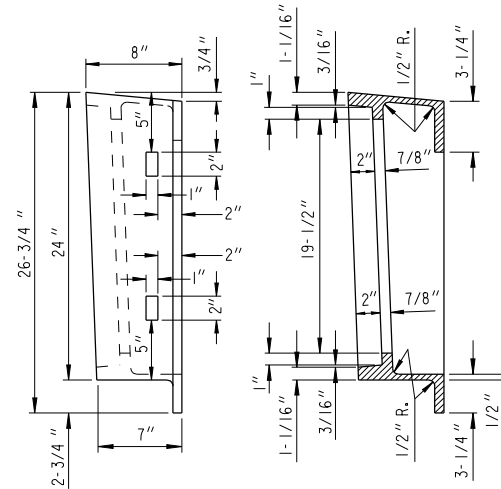
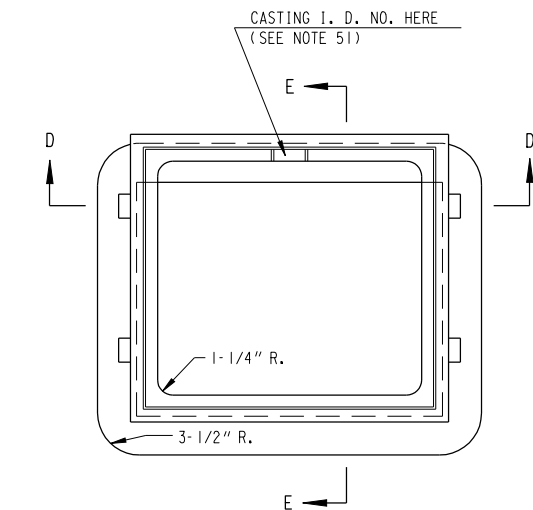
ALL CASTINGS SHALL BEAR THE FOLLOWING IDENTIFICATION MARKS
IN THE FORM OF LEGIBLE LETTERS OR NUMERALS RAISED 1/8 INCH

ON THE FRAME

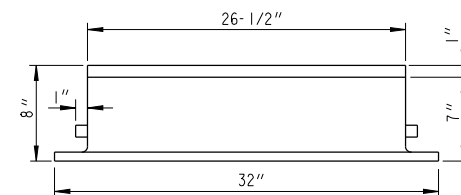
- ON THE UPPER FACE OF THE FLANGE IN 1 INCH HIGH LETTERS
THE INITIALS OR MONOGRAM OF THE FOUNDRY, THE YEAR MADE
AND THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.
- ON THE SEAT OF THE FRAME IN 3/4 INCH HIGH LETTERS, THE
CASTING IDENTIFICATION NUMBER (8).

ON THE GRATE

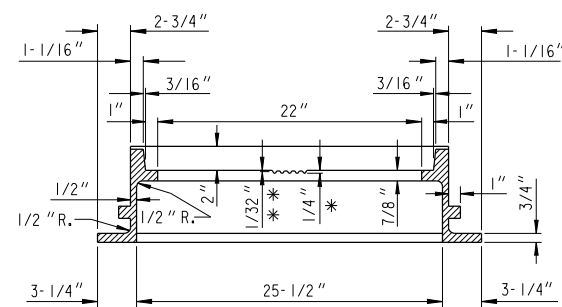
- ON THE UPPER SIDE OF THE GRATE IN 1 INCH HIGH LETTERS,
THE INITIALS OR MONOGRAM OF THE FOUNDRY, THE YEAR MADE,
THE CASTING IDENTIFICATION NUMBER (55) AND THE SERIAL
NUMBER OF THE INDIVIDUAL CASTING.



SECTION E-E



FRAME



SECTION D-D

* DEPRESSION FOR LETTERS
 ** CLEARANCE FROM TOP OF LETTERS TO FACE OF SEAT

GENERAL NOTES

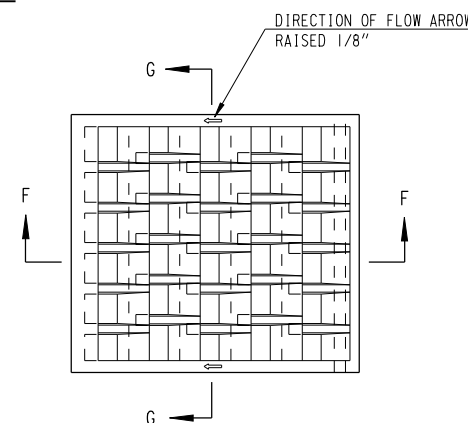
ALL EDGES ARE TO BE GROUND
 ALL CASTINGS SHALL BEAR THE FOLLOWING IDENTIFICATION MARKS
 IN THE FORM OF LEGIBLE LETTERS OR NUMERALS RAISED 1/8"

ON THE FRAME

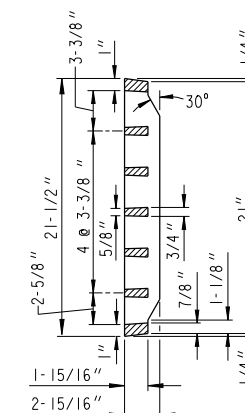
- ON THE UPPER FACE OF THE FLANGE IN 1 INCH HIGH LETTERS THE INITIALS OR MONOGRAM OF THE FOUNDRY, THE YEAR MADE AND THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.
- ON THE SEAT OF THE FRAME IN 1 INCH HIGH LETTERS, THE CASTING IDENTIFICATION NUMBER (51).

ON THE GRATE

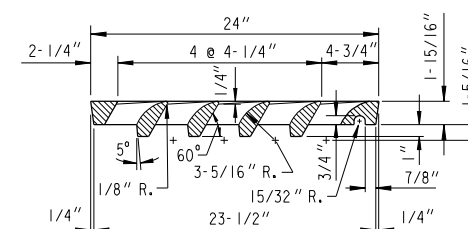
- ON THE UPPER SIDE OF THE GRATE IN 1 INCH HIGH LETTERS, THE INITIALS OR MONOGRAM OF THE FOUNDRY, THE YEAR MADE, THE CASTING IDENTIFICATION NUMBER (57) AND THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.



GRATE



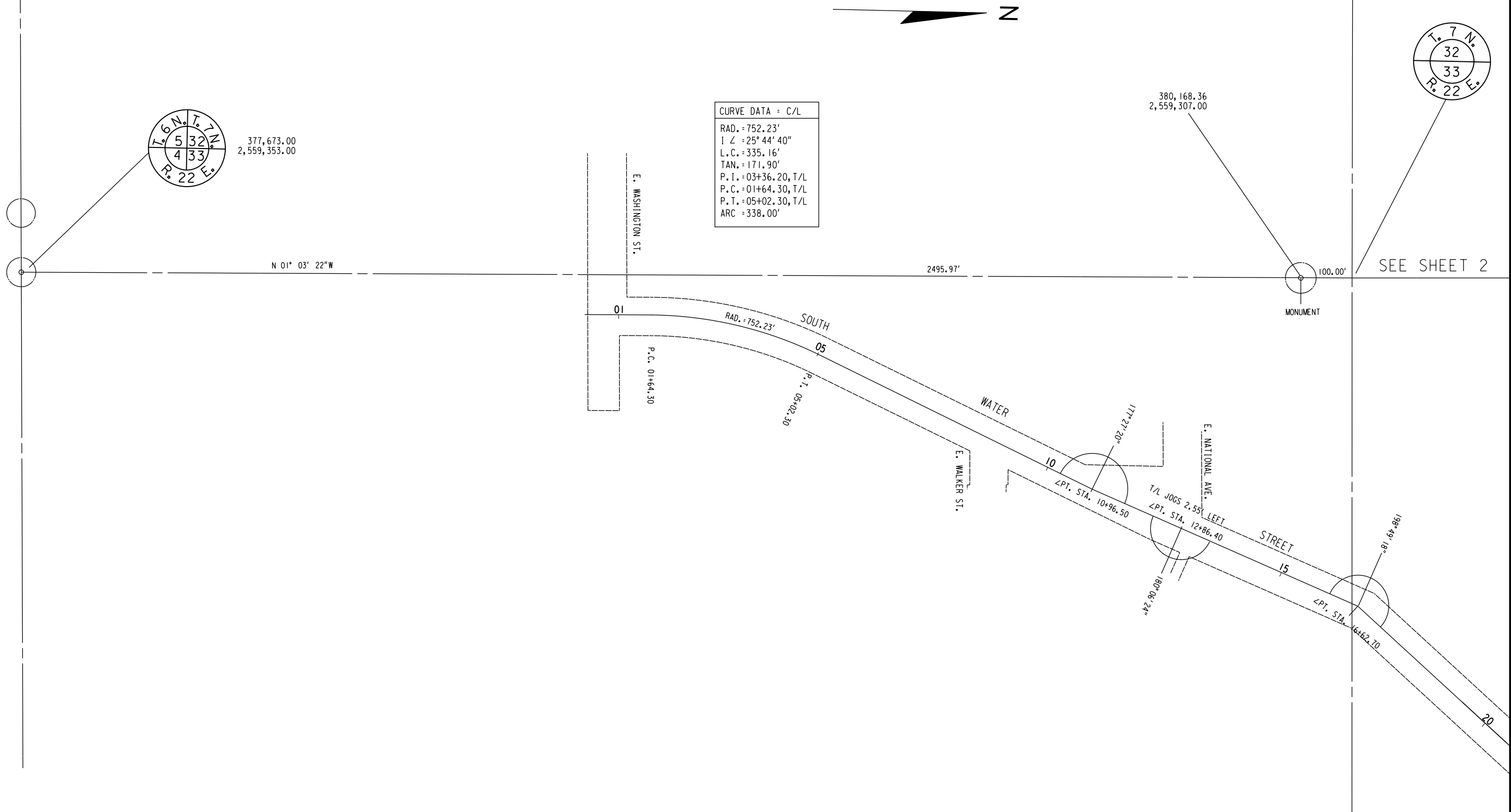
SECTION G-G

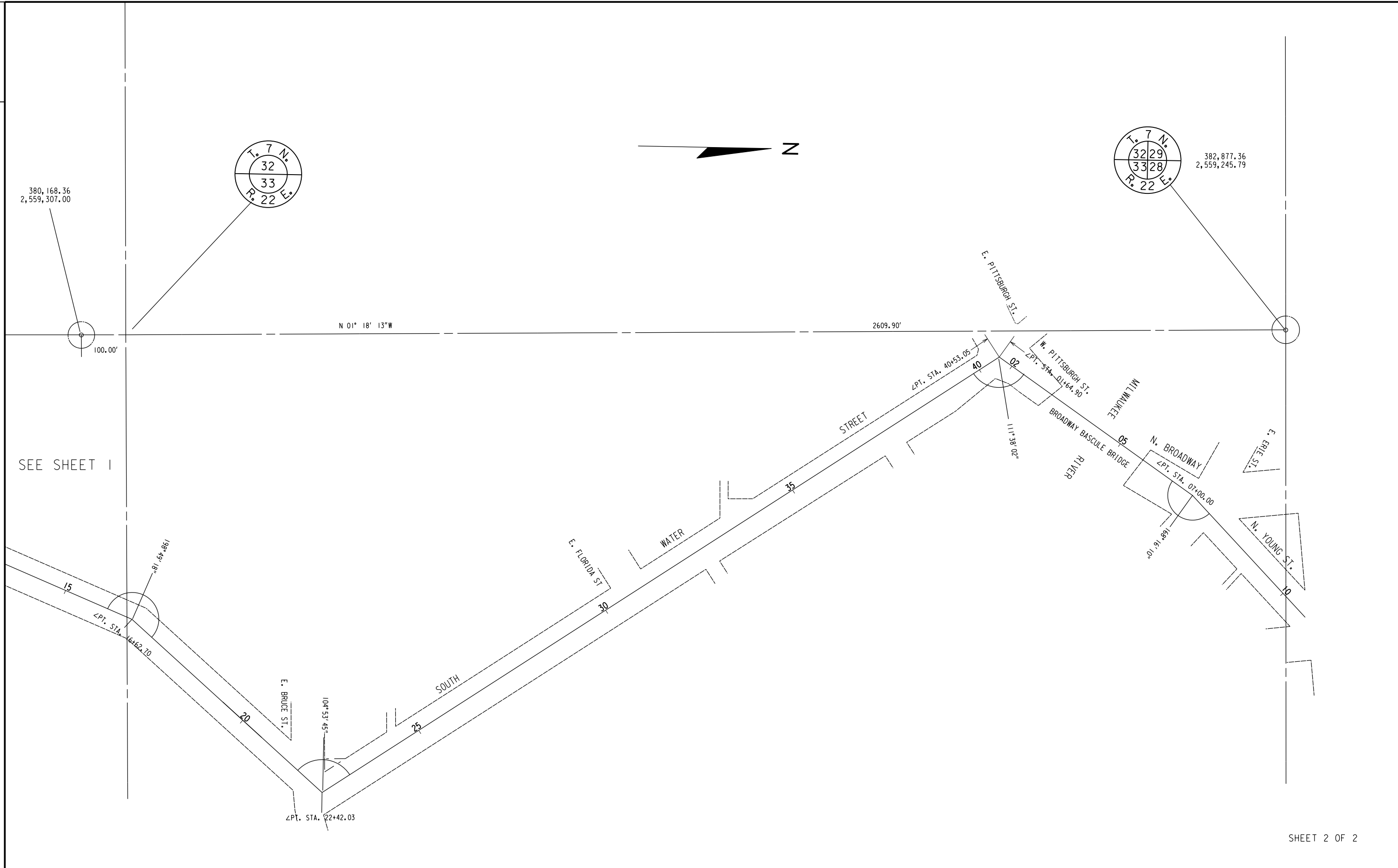


SECTION F-F

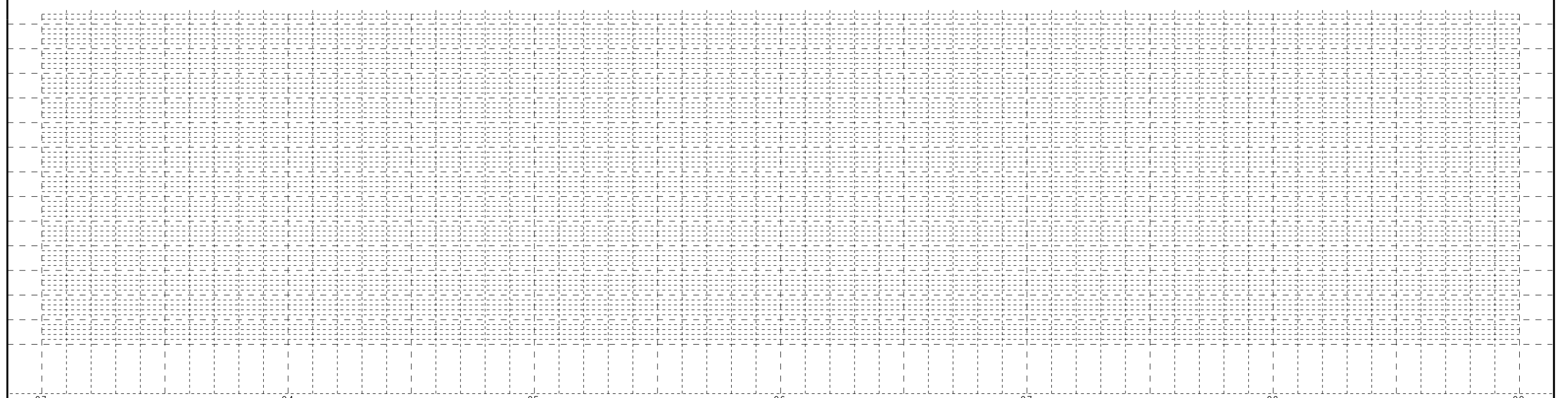
INLET COVER - TYPE 57

LID-145 LBS., FRAME-204 LBS.

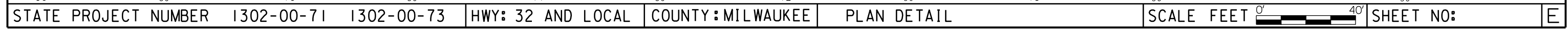




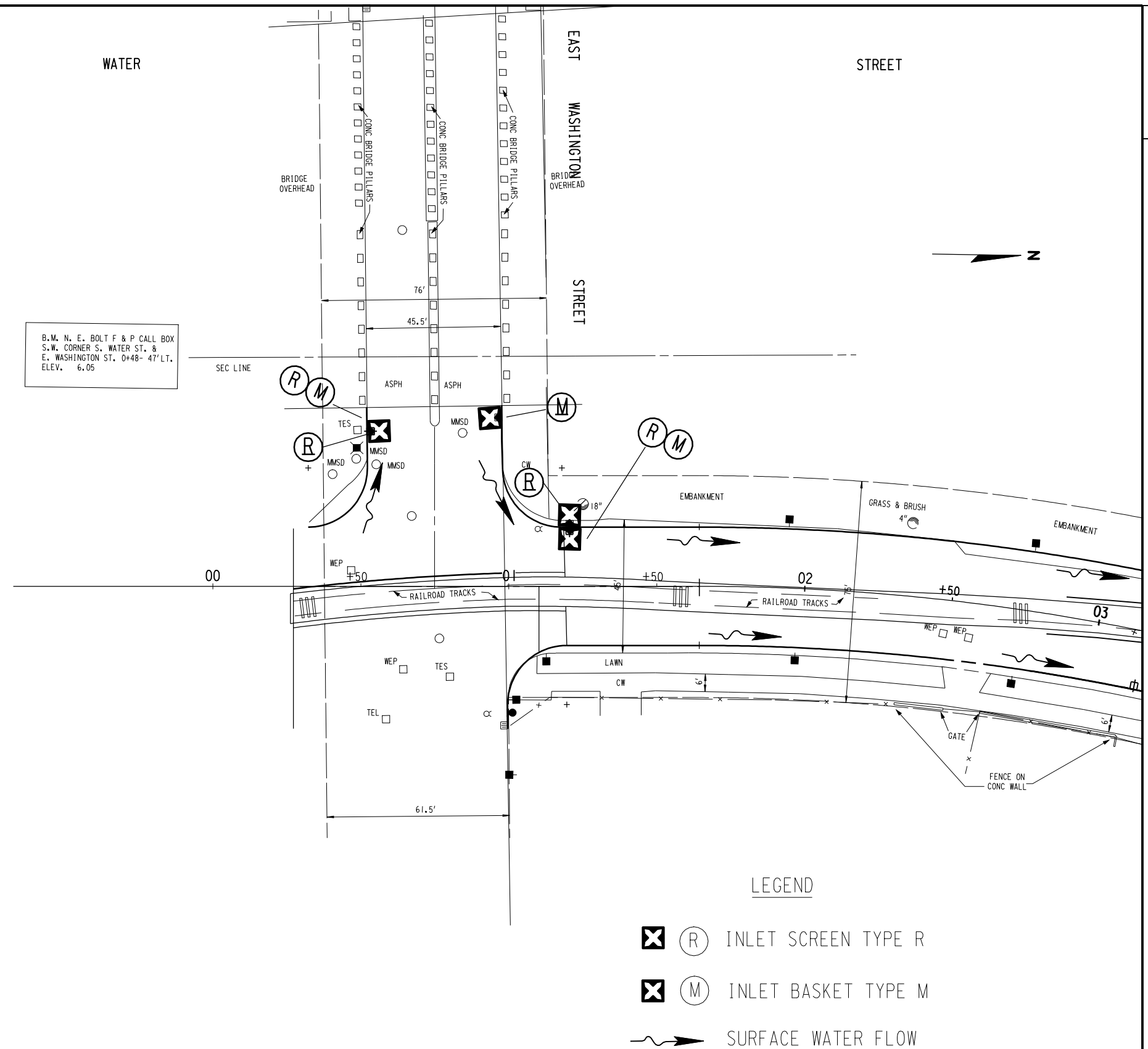
STREET



FILE NAME: W:\SPR\BAY VIEW_DOWNTOWN BIKE ROUTE\PHASE 2\T-4_03_09DET.DGN



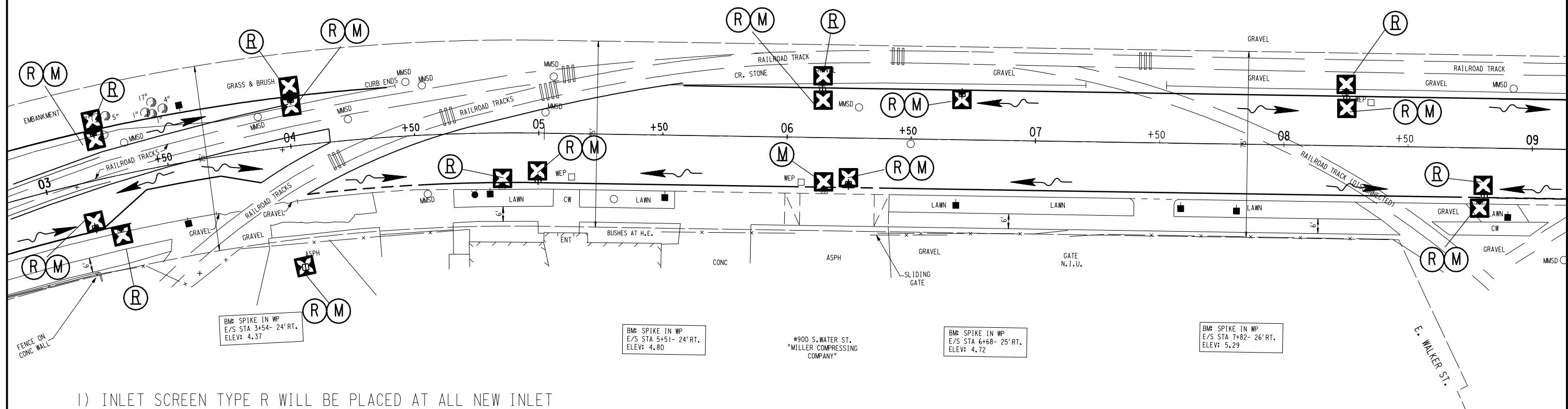
- 1) INLET SCREEN TYPE R WILL BE PLACED AT ALL NEW INLET AND CATCH BASIN LOCATIONS DURING GRADING STAGES.
- 2) INLET BASKET TYPE M WILL BE PLACED UNDER ALL INLET AND CATCH BASIN COVERS UNTIL COMPLETION OF PROJECT.
- 3) EROSION CONTROL FEATURES AS SHOWN ON THE PLAN ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- 4) SEE CONSTRUCTION DETAILS.



SOUTH

WATER

STREET



- 1) INLET SCREEN TYPE R WILL BE PLACED AT ALL NEW INLET AND CATCH BASIN LOCATIONS DURING GRADING STAGES.
- 2) INLET BASKET TYPE M WILL BE PLACED UNDER ALL INLET AND CATCH BASIN COVERS UNTIL COMPLETION OF PROJECT.
- 3) EROSION CONTROL FEATURES AS SHOWN ON THE PLAN ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- 4) SEE CONSTRUCTION DETAILS.

LEGEND

- ⊗ (R) INLET SCREEN TYPE R
- ⊗ (M) INLET BASKET TYPE M
- SURFACE WATER FLOW

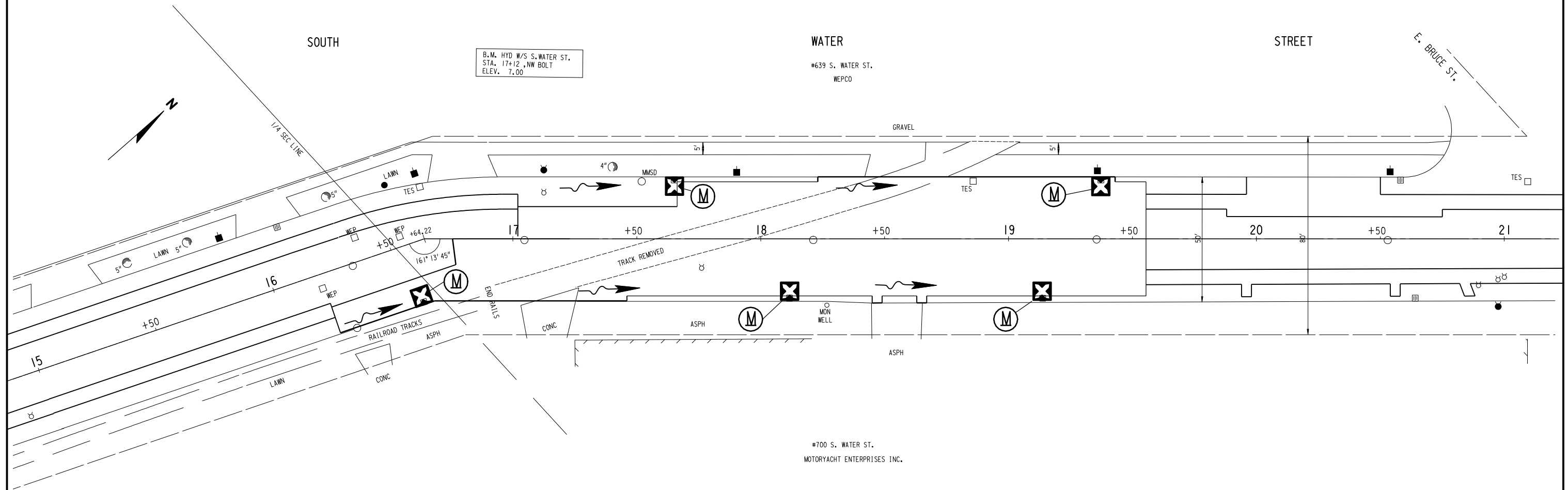


- 1) INLET SCREEN TYPE R WILL BE PLACED AT ALL NEW INLET AND CATCH BASIN LOCATIONS DURING GRADING STAGES.
- 2) INLET BASKET TYPE M WILL BE PLACED UNDER ALL INLET AND CATCH BASIN COVERS UNTIL COMPLETION OF PROJECT.
- 3) EROSION CONTROL FEATURES AS SHOWN ON THE PLAN ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- 4) SEE CONSTRUCTION DETAILS.

- 

 INLET SCREEN TYPE R
 INLET BASKET TYPE M

 SURFACE WATER FLOW



LEGEND



INLET SCREEN TYPE R



INLET BASKET TYPE M


SURFACE WATER FLOW

1) INLET SCREEN TYPE R WILL BE PLACED AT ALL NEW INLET AND CATCH BASIN LOCATIONS DURING GRADING STAGES.

2) INLET BASKET TYPE M WILL BE PLACED UNDER ALL INLET AND CATCH BASIN COVERS UNTIL COMPLETION OF PROJECT.

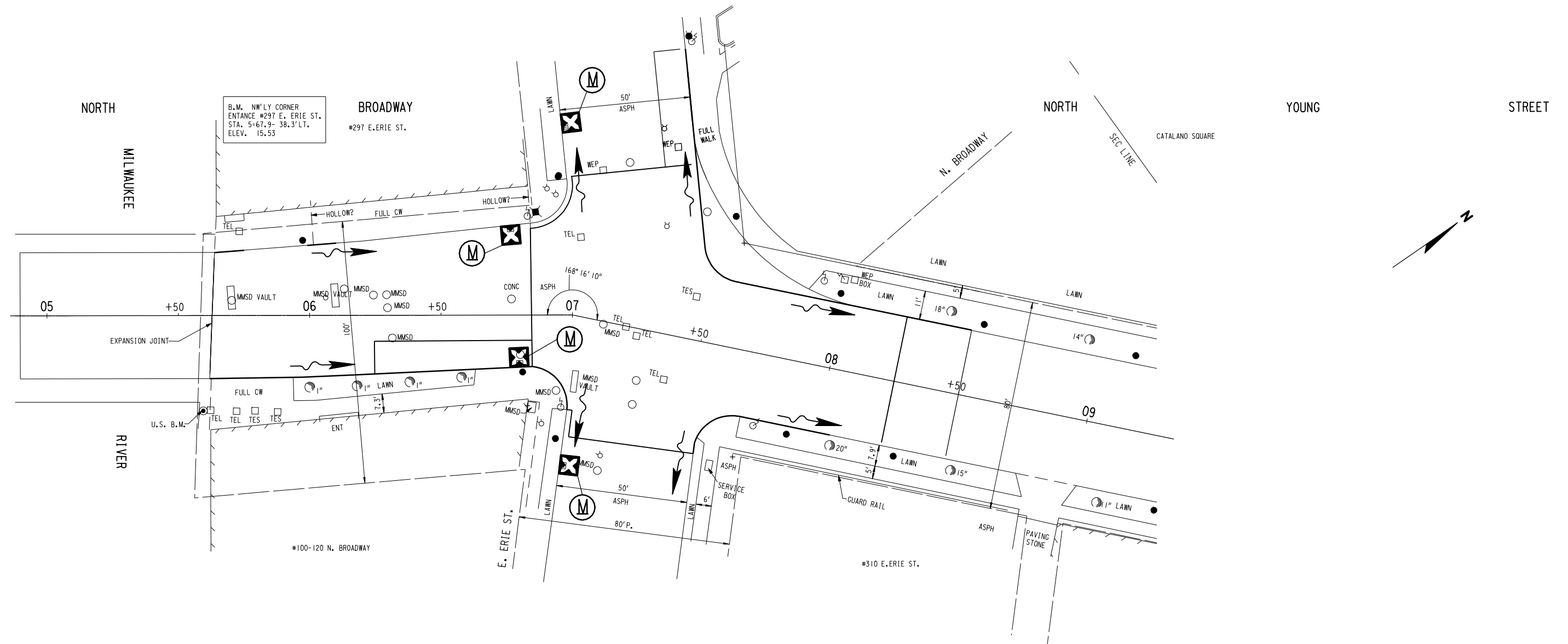
3) EROSION CONTROL FEATURES AS SHOWN ON THE PLAN ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

4) SEE CONSTRUCTION DETAILS.



- 1) INLET SCREEN TYPE R WILL BE PLACED AT ALL NEW INLET AND CATCH BASIN LOCATIONS DURING GRADING STAGES.
- 2) INLET BASKET TYPE M WILL BE PLACED UNDER ALL INLET AND CATCH BASIN COVERS UNTIL COMPLETION OF PROJECT.
- 3) EROSION CONTROL FEATURES AS SHOWN ON THE PLAN ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- 4) SEE CONSTRUCTION DETAILS.

-  (R) INLET SCREEN TYPE R
 (M) INLET BASKET TYPE M
 SURFACE WATER FLOW



LEGEND



INLET SCREEN TYPE R



INLET BASKET TYPE M


SURFACE WATER FLOW

1) INLET SCREEN TYPE R WILL BE PLACED AT ALL NEW INLET AND CATCH BASIN LOCATIONS DURING GRADING STAGES.

2) INLET BASKET TYPE M WILL BE PLACED UNDER ALL INLET AND CATCH BASIN COVERS UNTIL COMPLETION OF PROJECT.

3) EROSION CONTROL FEATURES AS SHOWN ON THE PLAN ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

4) SEE CONSTRUCTION DETAILS.

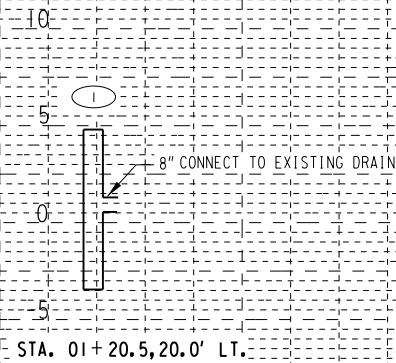
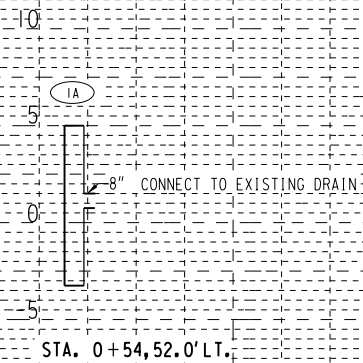
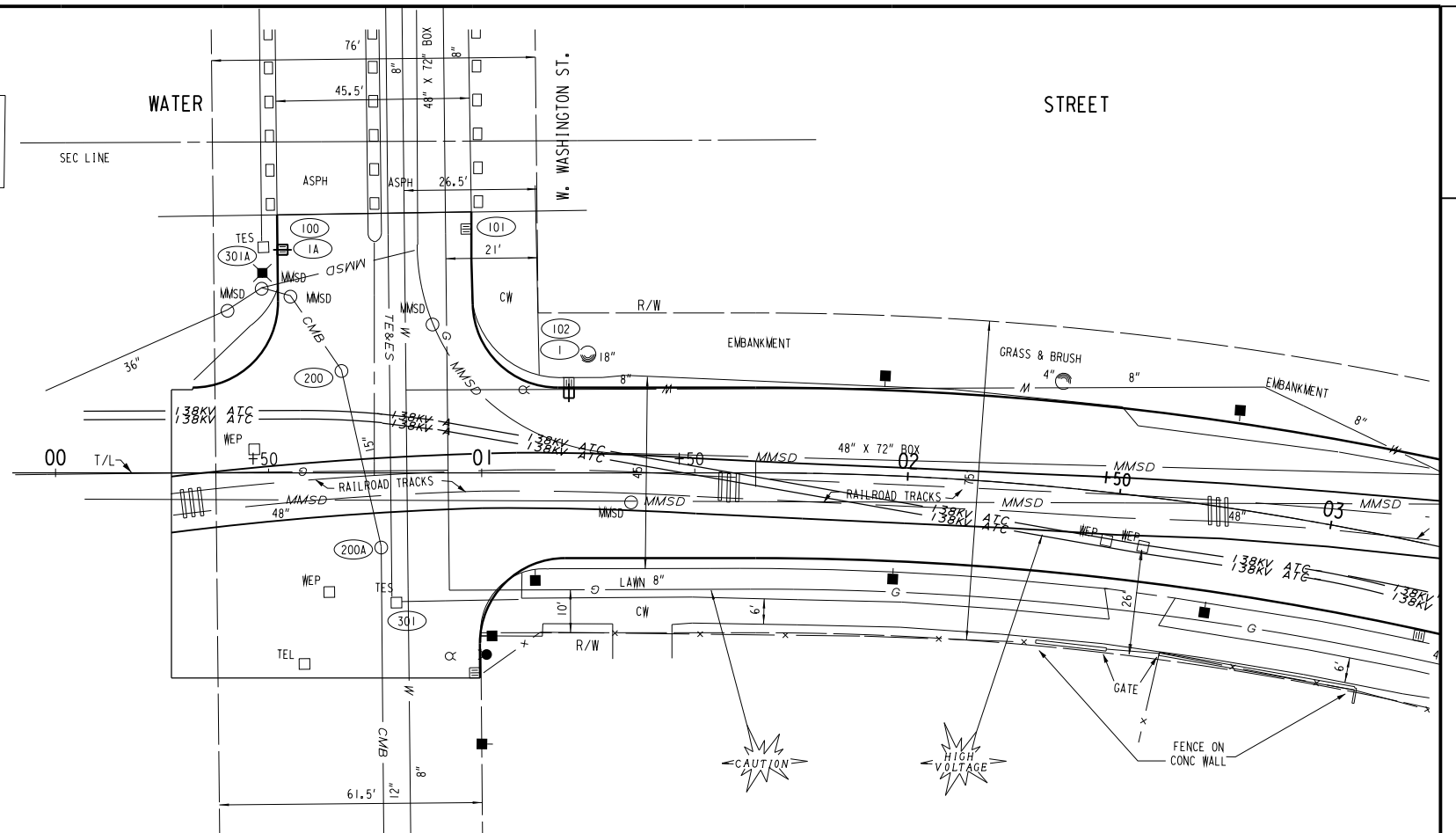
SOUTH

B.M. N. E. BOLT F & P CALL BOX
S.W. CORNER S. WATER ST. &
E. WASHINGTON ST. 0+48- 47' LT.
ELEV. 6.05



WATER

STREET



+50

+50

+50

+50

01

+50

02

+50

03

STATE PROJECT NUMBER 1302-00-71 1302-00-73

HWY:STH32 & LOCAL

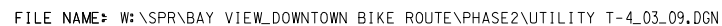
COUNTY:MILWAUKEE

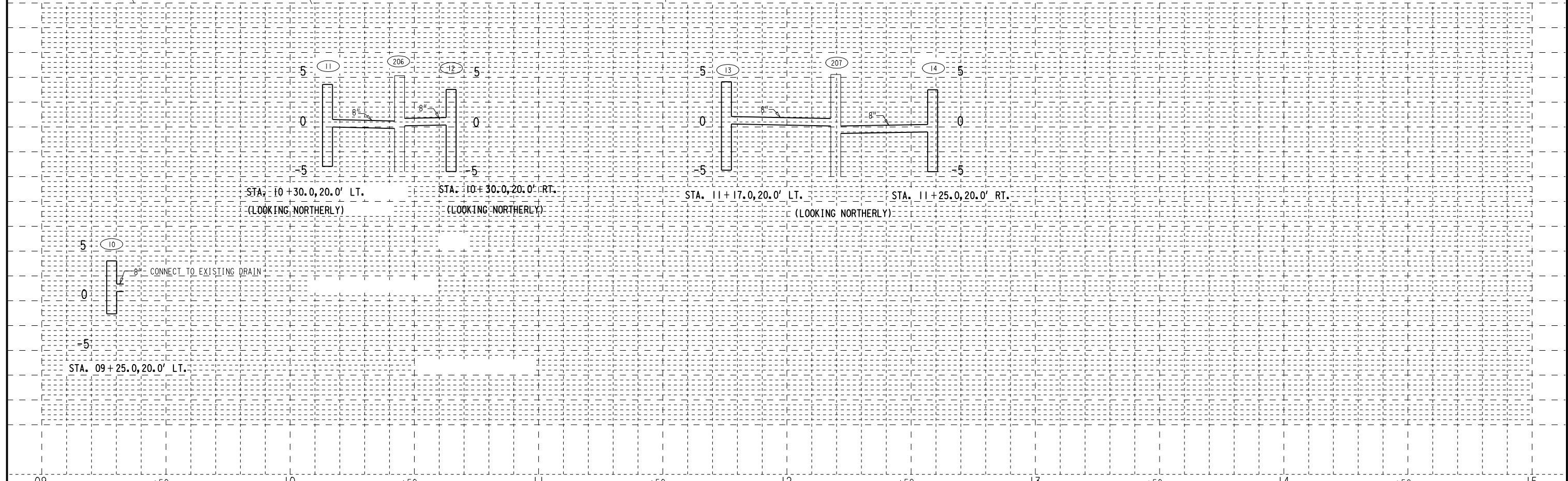
UTILITIES AND DRAINAGE

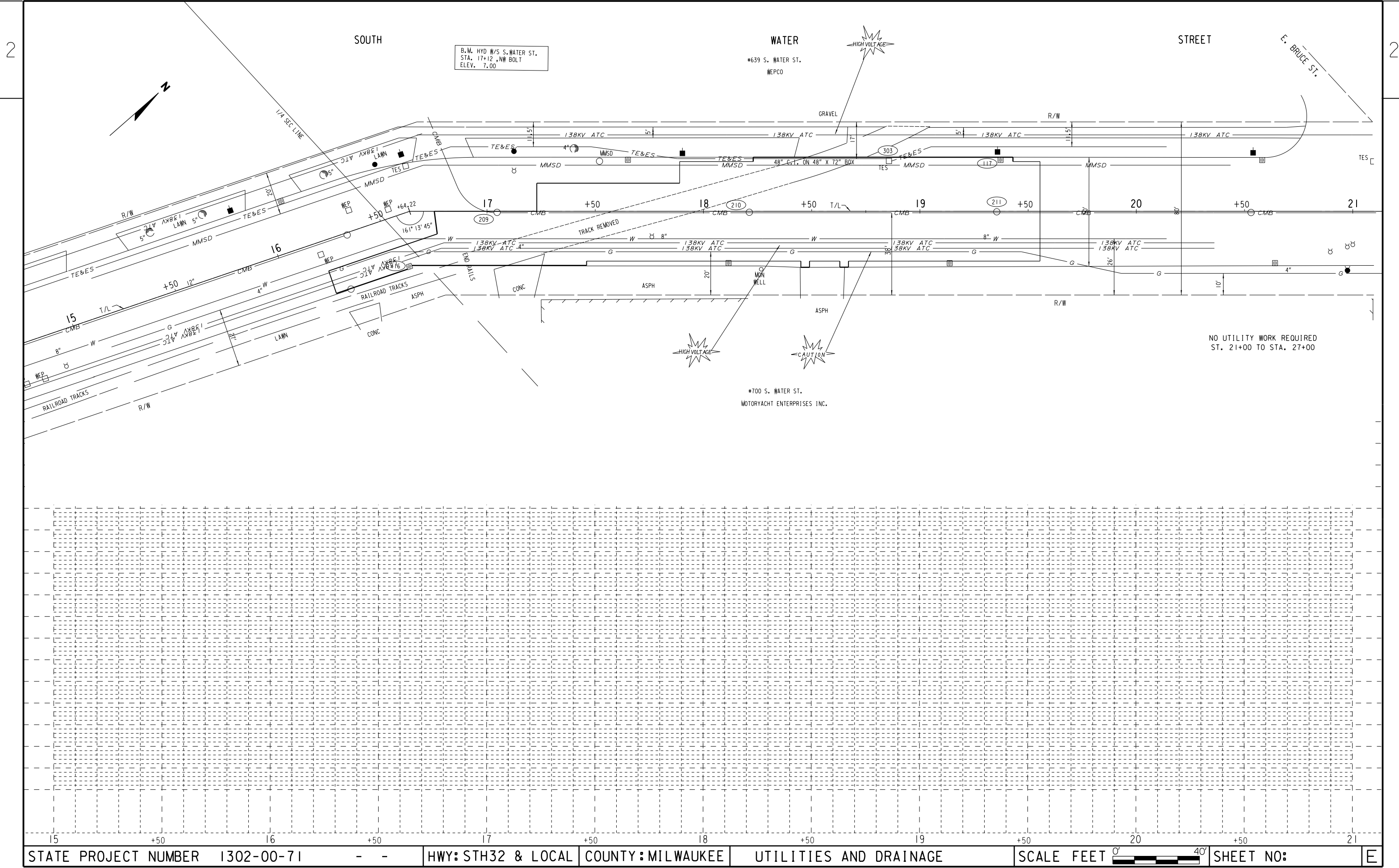
SCALE FEET 0' 40'

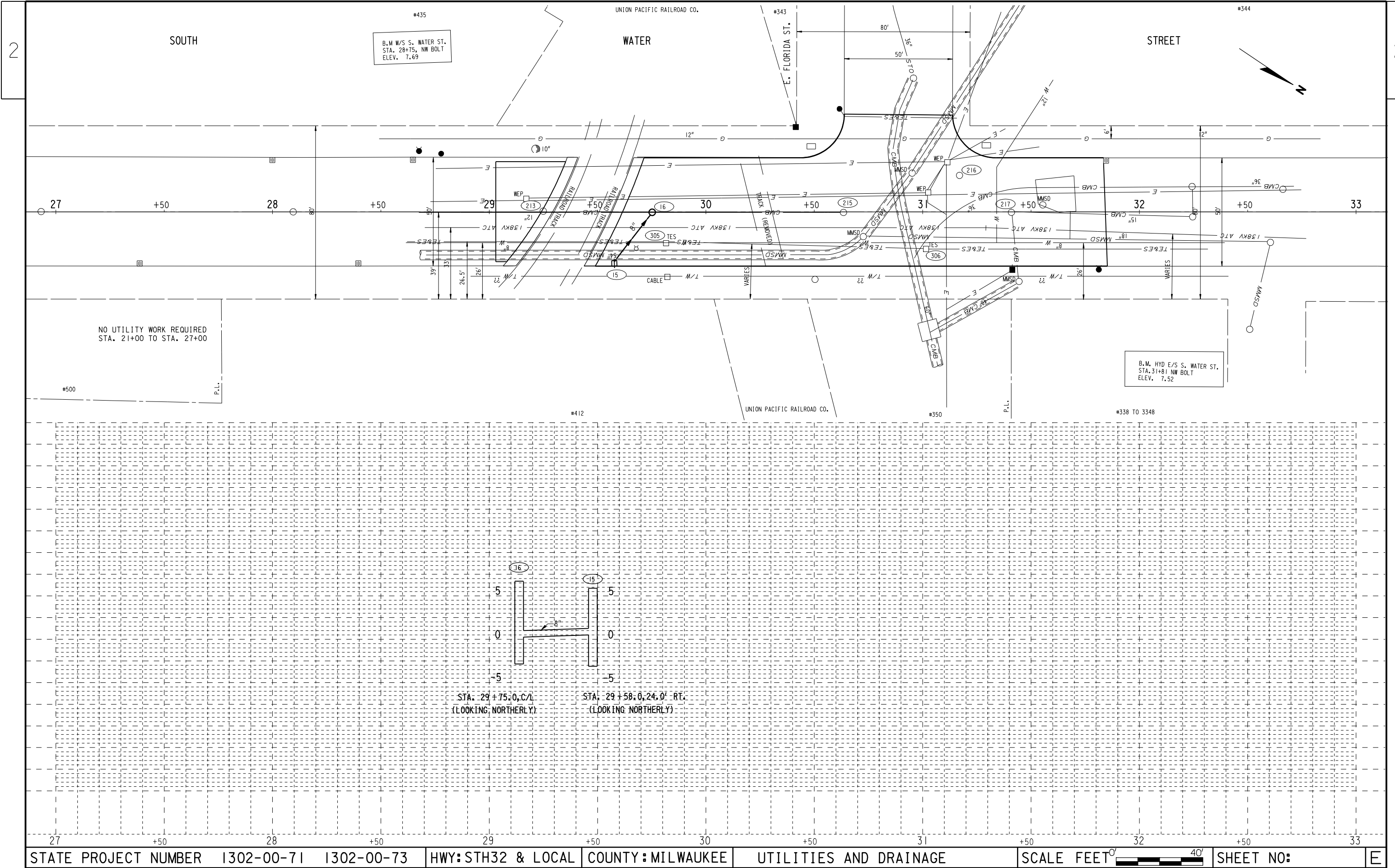
SHEET NO:

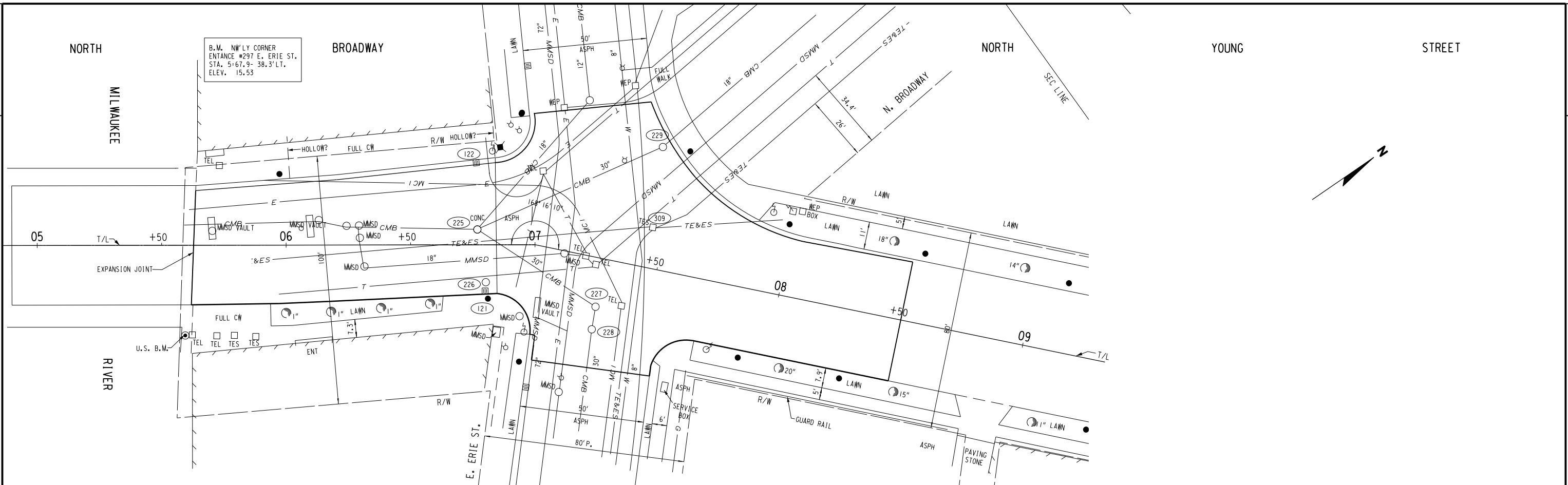
E

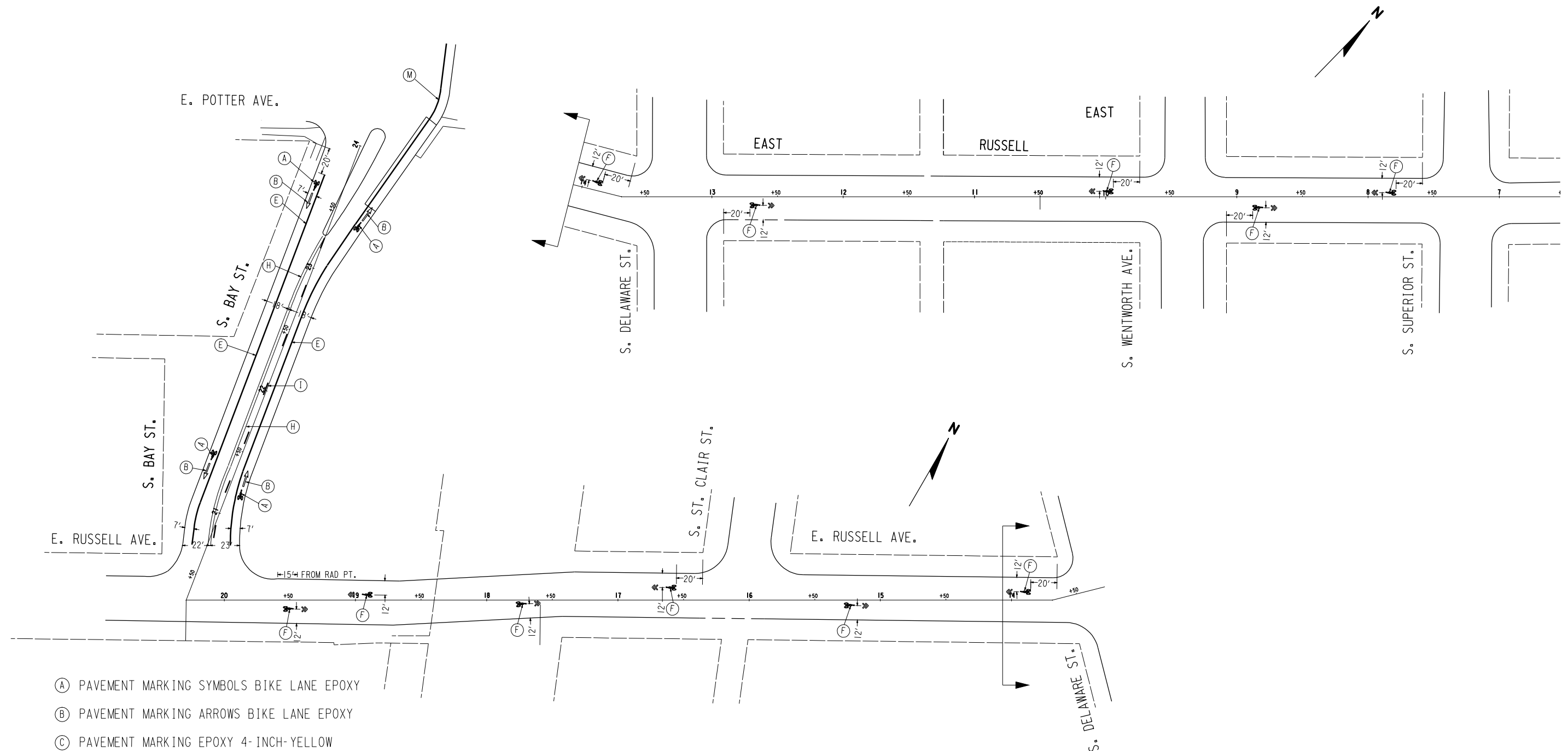












- (A) PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
- (B) PAVEMENT MARKING ARROWS BIKE LANE EPOXY
- (C) PAVEMENT MARKING EPOXY 4-INCH-YELLOW
- (D) PAVEMENT MARKING EPOXY 4-INCH-WHITE
- (E) PAVEMENT MARKING EPOXY 6-INCH-WHITE
- (F) PAVEMENT MARKING SYMBOLS BIKE SHARED LANE EPOXY
- (G) PAVEMENT MARKING EPOXY 12-INCH-WHITE
- (H) PAVEMENT MARKING EPOXY 4" DOUBLE YELLOW
- (I) REMOVAL OF EXISTING 4" DOUBLE YELLOW
- (M) MATCH EXISTING

SHEET 1 OF 5

STATE PROJECT NUMBER:

1302-00-71, 1302-00-73

HWY. STH 32 & LOCAL

COUNTY: MILWAUKEE

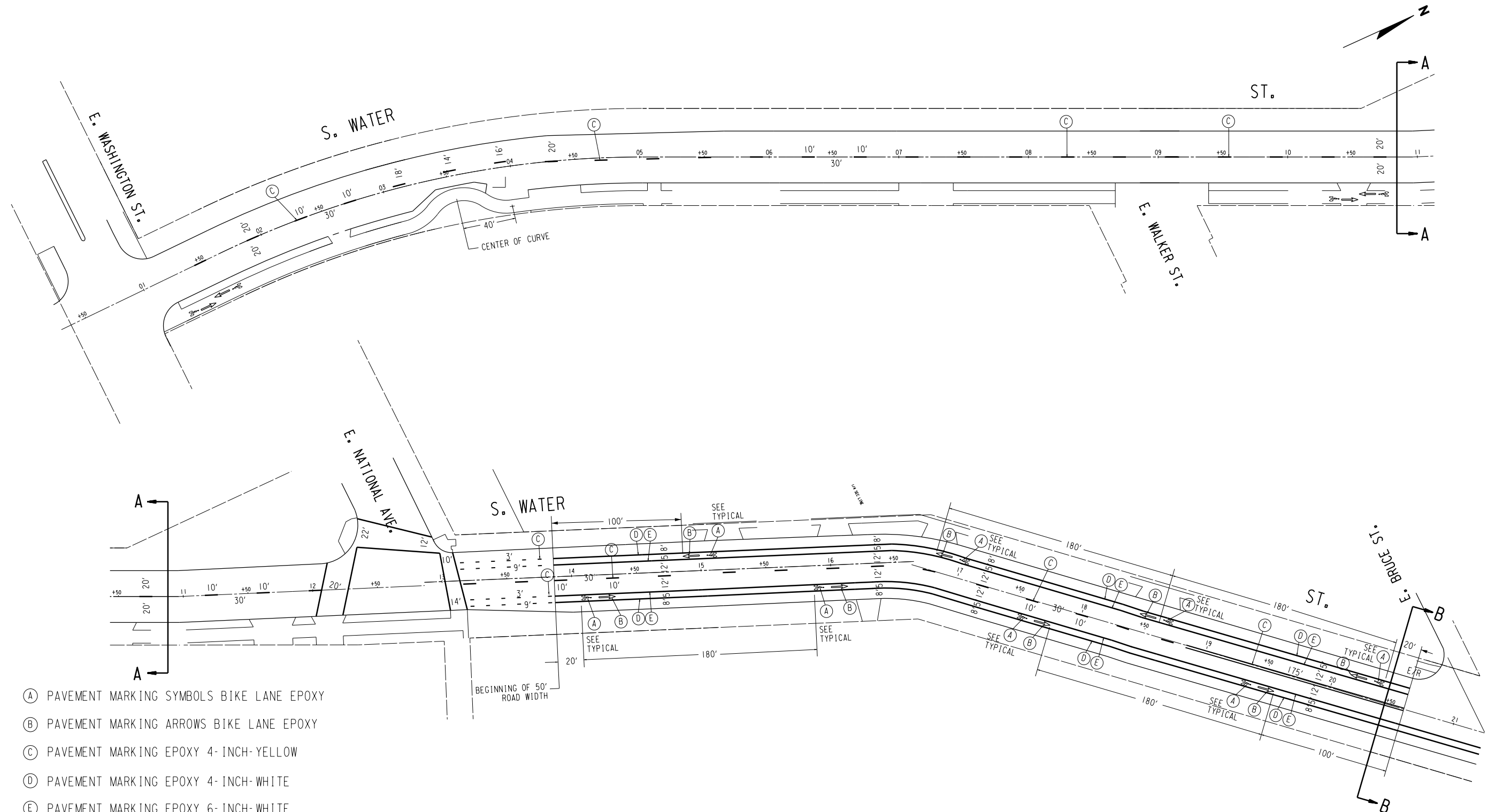
PAVEMENT MARKING

SCALE FEET



SHEET NO:

E



- (A) PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
- (B) PAVEMENT MARKING ARROWS BIKE LANE EPOXY
- (C) PAVEMENT MARKING EPOXY 4-INCH-YELLOW
- (D) PAVEMENT MARKING EPOXY 4-INCH-WHITE
- (E) PAVEMENT MARKING EPOXY 6-INCH-WHITE
- (F) PAVEMENT MARKING SYMBOLS BIKE SHARED LANE EPOXY
- (G) PAVEMENT MARKING EPOXY 12-INCH-WHITE
- (H) PAVEMENT MARKING EPOXY 4" DOUBLE YELLOW
- (I) ERADICATION OF EXISTING 4" DOUBLE YELLOW
- (M) MATCH EXISTING

SHEET 2 OF 5

STATE PROJECT NUMBER: 1302-00-71, 1302-00-73

HWY. STH 32 & LOCAL

COUNTY: MILWAUKEE

PAVEMENT MARKING

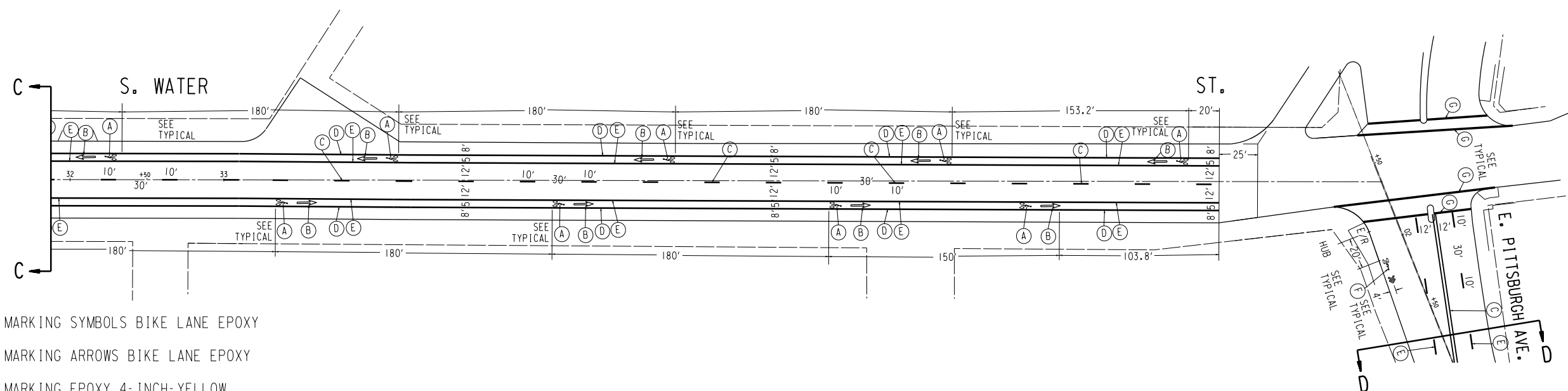
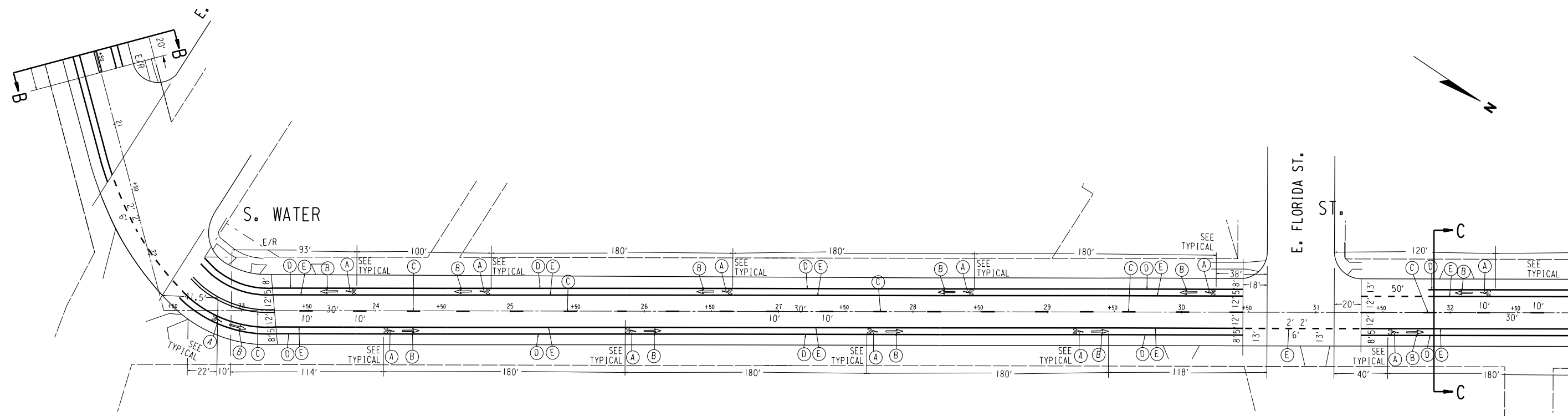
SCALE FEET 0' 80'

SHEET NO:

E

FILE NAME: W:\SPR\BAY VIEW_DOWNTOWN BIKE ROUTE\PHASE 2\PAVEMARK_WATER.DGN

REVISED: 7-9-2013



- (A) PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
- (B) PAVEMENT MARKING ARROWS BIKE LANE EPOXY
- (C) PAVEMENT MARKING EPOXY 4-INCH-YELLOW
- (D) PAVEMENT MARKING EPOXY 4-INCH-WHITE
- (E) PAVEMENT MARKING EPOXY 6-INCH-WHITE
- (F) PAVEMENT MARKING SYMBOLS BIKE SHARED LANE EPOXY
- (G) PAVEMENT MARKING EPOXY 12-INCH-WHITE
- (H) PAVEMENT MARKING EPOXY 4" DOUBLE YELLOW
- (I) ERADICATION OF EXISTING 4" DOUBLE YELLOW
- (M) MATCH EXISTING

SHEET 3 OF 5

STATE PROJECT NUMBER: 1302-00-71, 1302-00-73

HWY. STH 32 & LOCAL

COUNTY: MILWAUKEE

PAVEMENT MARKING

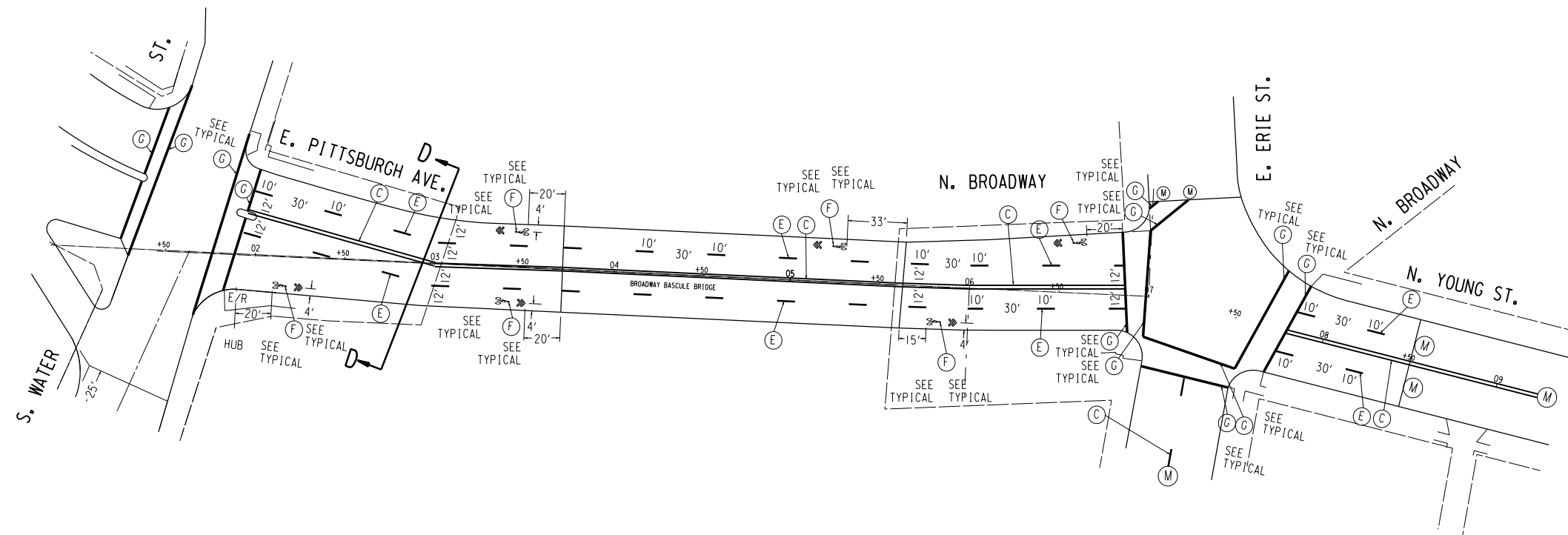
SCALE FEET 0' 80'

SHEET NO:

E

FILE NAME: W:\SPR\BAY VIEW\DOWNTOWN BIKE ROUTE\PHASE 2\PAVEMARK_WATER.DGN

REVISED: 12-2-2011



- Ⓐ PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY
- Ⓑ PAVEMENT MARKING ARROWS BIKE LANE EPOXY
- Ⓒ PAVEMENT MARKING EPOXY 4-INCH-YELLOW
- Ⓓ PAVEMENT MARKING EPOXY 4-INCH-WHITE
- Ⓔ PAVEMENT MARKING EPOXY 6-INCH-WHITE
- Ⓕ PAVEMENT MARKING SYMBOLS BIKE SHARED LANE EPOXY
- Ⓖ PAVEMENT MARKING EPOXY 12-INCH-WHITE
- Ⓗ PAVEMENT MARKING EPOXY 4" DOUBLE YELLOW
- Ⓘ ERADICATION OF EXISTING 4" DOUBLE YELLOW
- Ⓜ MATCH EXISTING

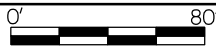
SHEET 4 OF 5

STATE PROJECT NUMBER: 1302-00-71, 1302-00-73

HWY. STH 32 & LOCAL

COUNTY : MILWAUKEE

PAVEMENT MARKING

SCALE FEET 

SHEET NO:

E

GENERAL PAVEMENT MARKING NOTES

ALL DOUBLE YELLOW CENTERLINES SHALL HAVE A 4 INCH (+/- 1 INCH) SPACE BETWEEN TWO (2) 4 INCH WIDE LINES. THE DIMENSIONS SHOWN IN THE PLAN ARE FROM FACE OF CURB TO THE CENTER OF THE 4 INCH SPACE, UNLESS OTHERWISE NOTED.

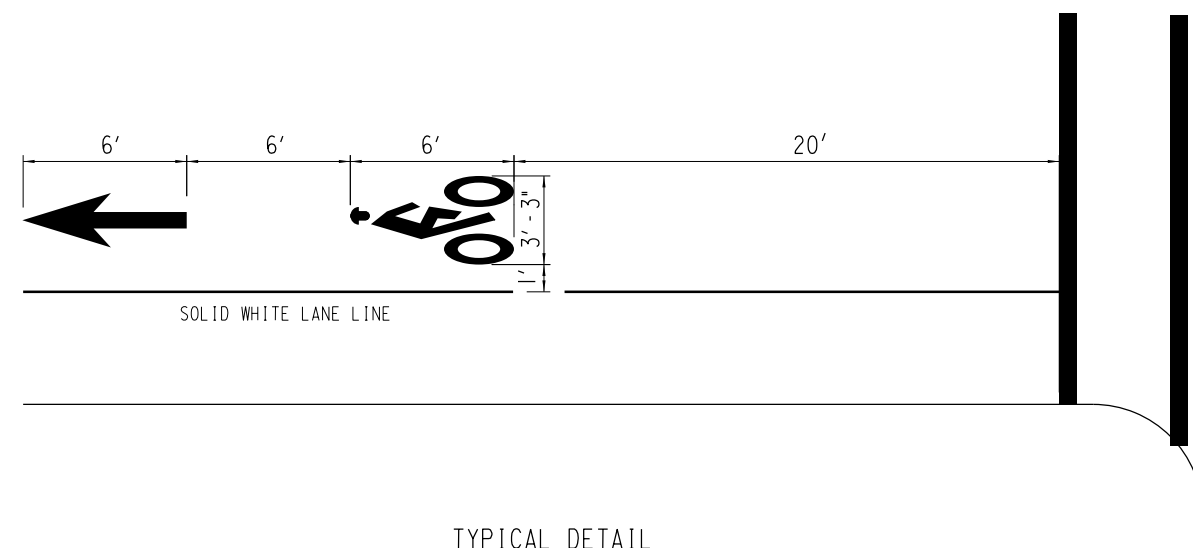
ALL WHITE LANE LINES SHALL BE 4 INCHES WIDE, 10 FEET LONG WITH A 30 FOOT SPACING. THE DIMENSIONS SHOWN IN THE PLAN ARE FROM THE FACE OF CURB TO CENTER OF PAVEMENT MARKING, UNLESS OTHERWISE NOTED.

ALL WHITE CROSSWALK LINES ARE 12 INCHES WIDE.

ALL WHITE STOP LINES ARE 24 INCHES WIDE.

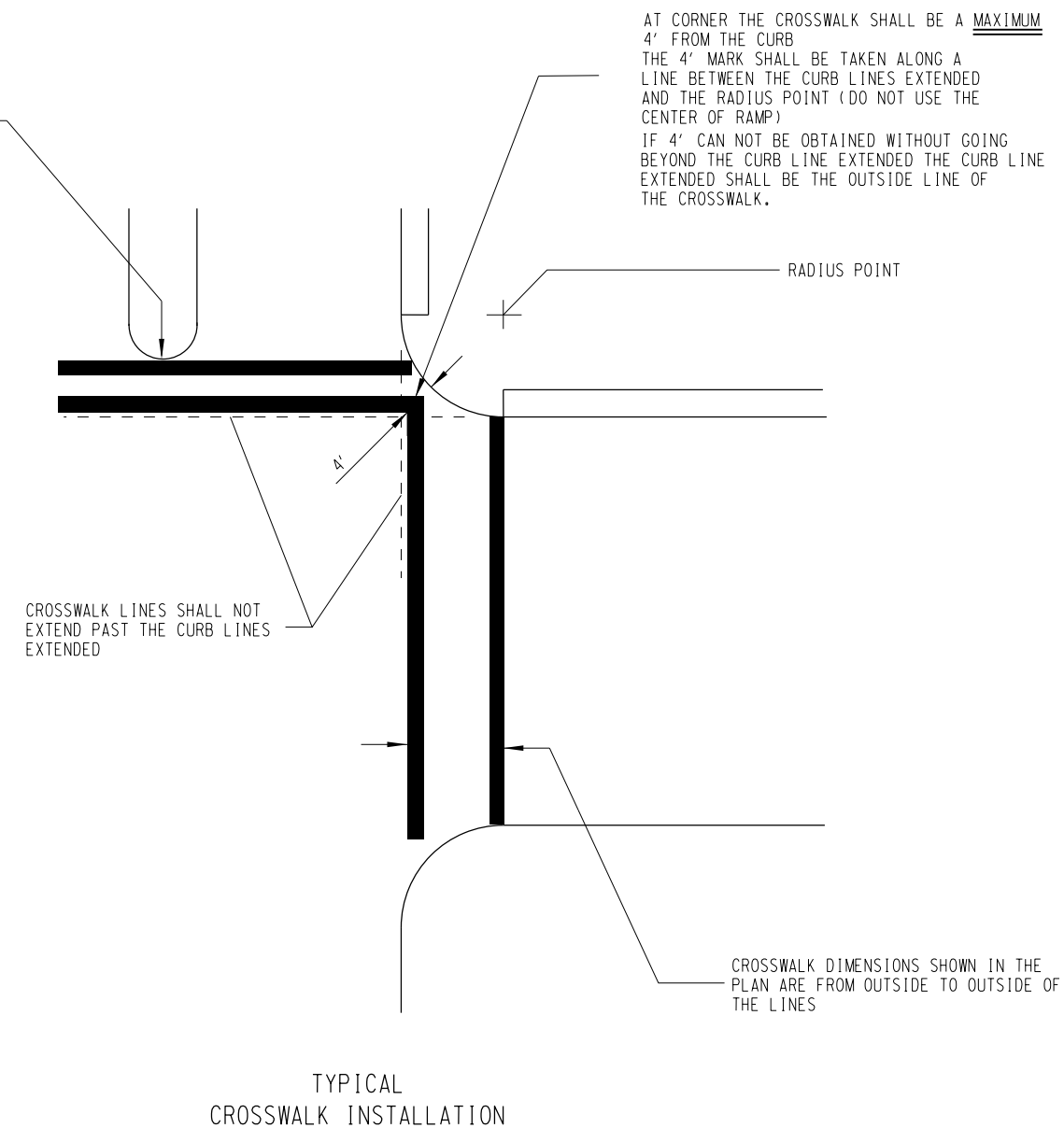
ALL PAVEMENT MARKINGS ARE TO BE EPOXY.

INCLUDE SANDBLASTING PRIOR TO INSTALLATION OF PAVEMENT MARKINGS.

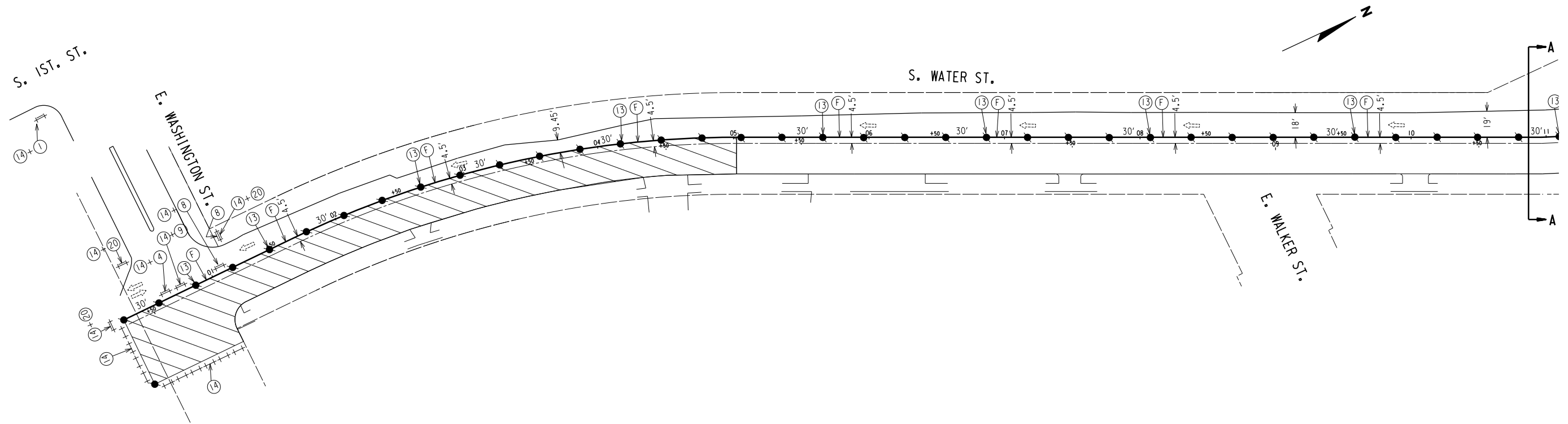


TYPICAL DETAIL
BIKE LANE

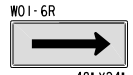
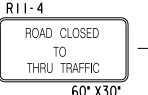
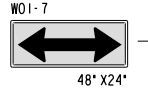
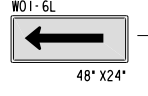
MEDIAN NOSE MUST REMAIN OUTSIDE
THE DESIGNATED CROSSWALK AREA.



STAGE I



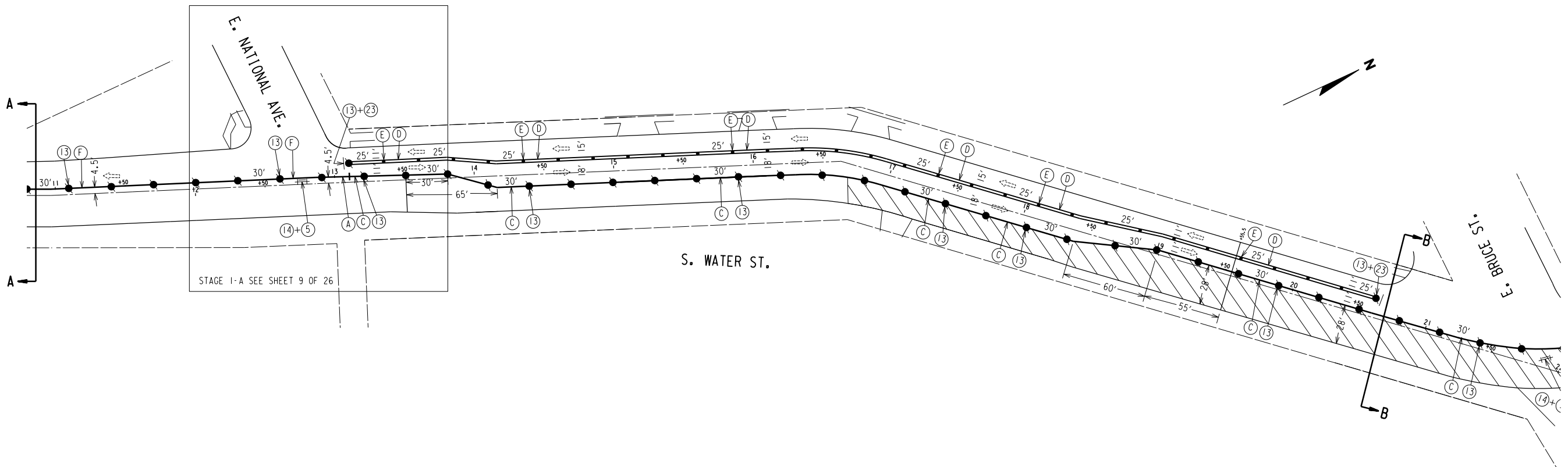
LEGEND

 ①	 ⑦	 ⑫	 ⑳	 ㉔	 ㉙	① TPM, REFLECTIVE PAINT, 4" WHITE
 ②	 ⑧	 ⑱	 ㉔	 ㉓	 ㉚	② TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
 ③	 ⑨	 ㉒	 ㉕	DRUMS W/LIGHTS 30' SPACING ⑬		③ TPM, REMOVABLE TAPE, 4" WHITE
 ④	 ⑩	 ㉑	 ㉖	TYPE III BARRICADES ⑭		④ TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
 ⑤	 ⑪	 ㉒	 ㉖	TYPE III BARRICADES W/ SIGN ⑭+①		⑤ TUBULAR MARKERS 25' SPACING ●
 ⑥				SIGNS BANNED TO UTILITY POLE ●		⑥ TPM, REFLECTIVE PAINT, 4" YELLOW
				WORK AREA ▨		⑦ TPM, REMOVABLE TAPE, 4" YELLOW
				DIRECTION OF TRAFFIC ⇄		⑧ TPM, REMOVABLE TAPE, 4" WHITE

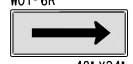
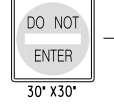
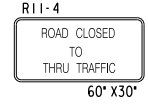
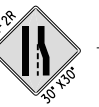
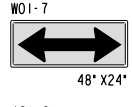
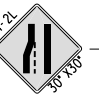
NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANNED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED. CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

SHEET 1 OF 26

STAGE I



LEGEND

 ①	 ⑦	 ⑫	 ⑮	 ⑳	 ㉑
 ②	 ⑧	 ⑱	 ㉒	 ㉓	 ㉔
 ③	 ⑨	 ㉕	 ㉖	DRUMS W/LIGHTS 30' SPACING ㉗	
 ④	 ⑩	 ㉘	 ㉙	TYPE III BARRICADES ㉚	
 ⑤	 ⑪	 ㉛	 ㉜	TYPE III BARRICADES W/ SIGN ㉝	
 ⑥				SIGNS BANDO TO UTILITY POLE ㉞	
				WORK AREA ㉟	
				DIRECTION OF TRAFFIC ㊱	

① TPM, REFLECTIVE PAINT, 4" WHITE

② TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW

③ TPM, REMOVABLE TAPE, 4" WHITE

④ TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW

⑤ TUBULAR MARKERS 25' SPACING

⑥ TPM, REFLECTIVE PAINT, 4" YELLOW

⑦ TPM, REMOVABLE TAPE, 4" YELLOW

⑧ TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE

⑨ TPM PAVEMENT MARKING WORDS REMOVABLE TAPE

⑩ TPM, REFLECTIVE PAINT, 24" WHITE

⑪ TPM, REMOVABLE TAPE, 24" WHITE

⑫ MATCH TO EXISTING

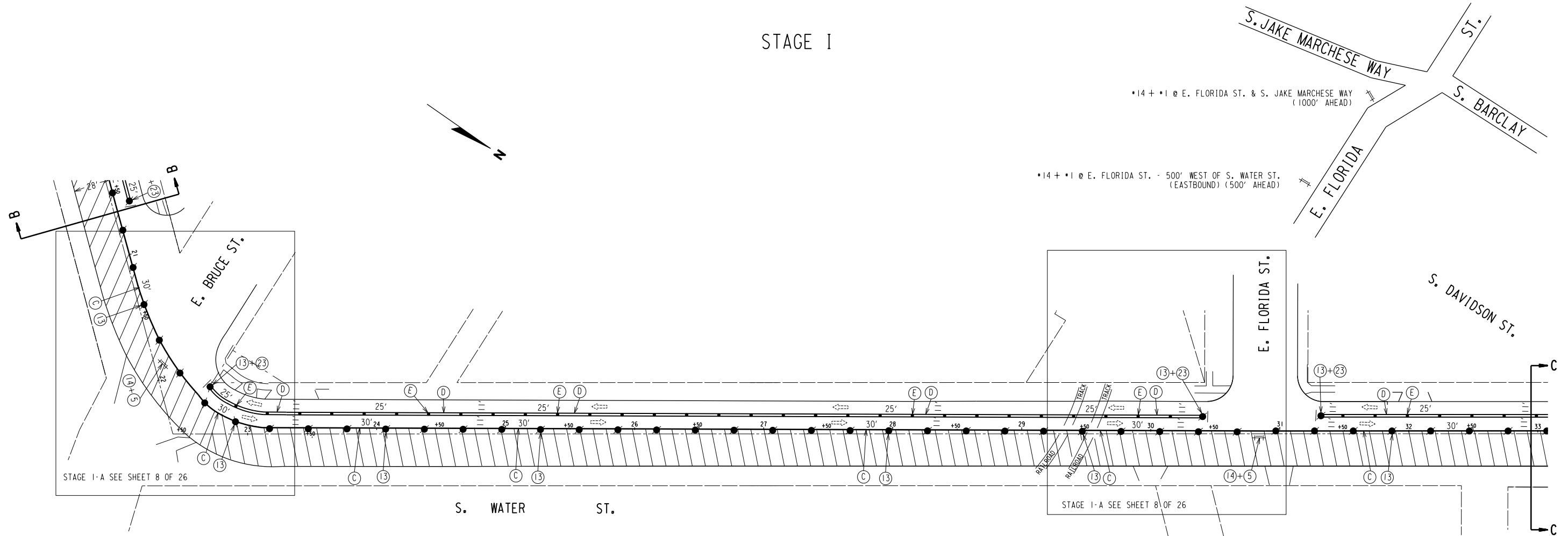
NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.

ALL SIGNS SHALL BE BANDO TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.

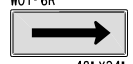
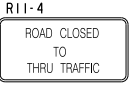
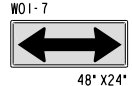
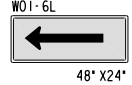
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

SHEET 2 OF 26

STAGE I



LEGEND

						(A) TPM, REFLECTIVE PAINT, 4" WHITE
						(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
						(C) TPM, REMOVABLE TAPE, 4" WHITE
						(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
						(E) TUBULAR MARKERS 25' SPACING
						(F) TPM, REFLECTIVE PAINT, 4" YELLOW
						(G) TPM, REMOVABLE TAPE, 4" YELLOW
						(K) TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE
						(R) TPM PAVEMENT MARKING WORDS REMOVABLE TAPE
						(X) TPM, REFLECTIVE PAINT, 24" WHITE
						(Y) TPM, REMOVABLE TAPE, 24" WHITE
						(M) MATCH TO EXISTING
						NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
						ALL SIGNS SHALL BE BANNED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
						CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

SHEET 3 OF 26

STATE PROJECT NUMBER: 1302-00-71, 73

HWY. STH 32 & LOCAL

COUNTY: MILWAUKEE

TRAFFIC CONTROL

SCALE FEET 

SHEET NO:

E

				DRUMS W/LIGHTS 30' SPACING (13) TYPE III BARRICADES ++ (14) TYPE III BARRICADES W/ SIGN (14) + (X) SIGNS BANNED TO UTILITY POLE WORK AREA DIRECTION OF TRAFFIC		(A) TPM, REFLECTIVE PAINT, 4" WHITE (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW (C) TPM, REMOVABLE TAPE, 4" WHITE (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW (E) TUBULAR MARKERS 25' SPACING (F) TPM, REFLECTIVE PAINT, 4" YELLOW (G) TPM, REMOVABLE TAPE, 4" YELLOW (K) TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE (R) TPM PAVEMENT MARKING WORDS REMOVABLE TAPE (X) TPM, REFLECTIVE PAINT, 24" WHITE (Y) TPM, REMOVABLE TAPE, 24" WHITE (M) MATCH TO EXISTING NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE BANNED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED. CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.
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STAGE I

•14 + •1 @ E. ERIE ST. & N. WATER ST.

•14 + •28 @ E. ERIE ST. & E. MENOMONEE ST.

NOTE:
MAINTAIN A NORTHBOUND/SOUTHBOUND
AND ALSO A EASTBOUND/WESTBOUND
CROSS WALK AT THIS INTERSECTION

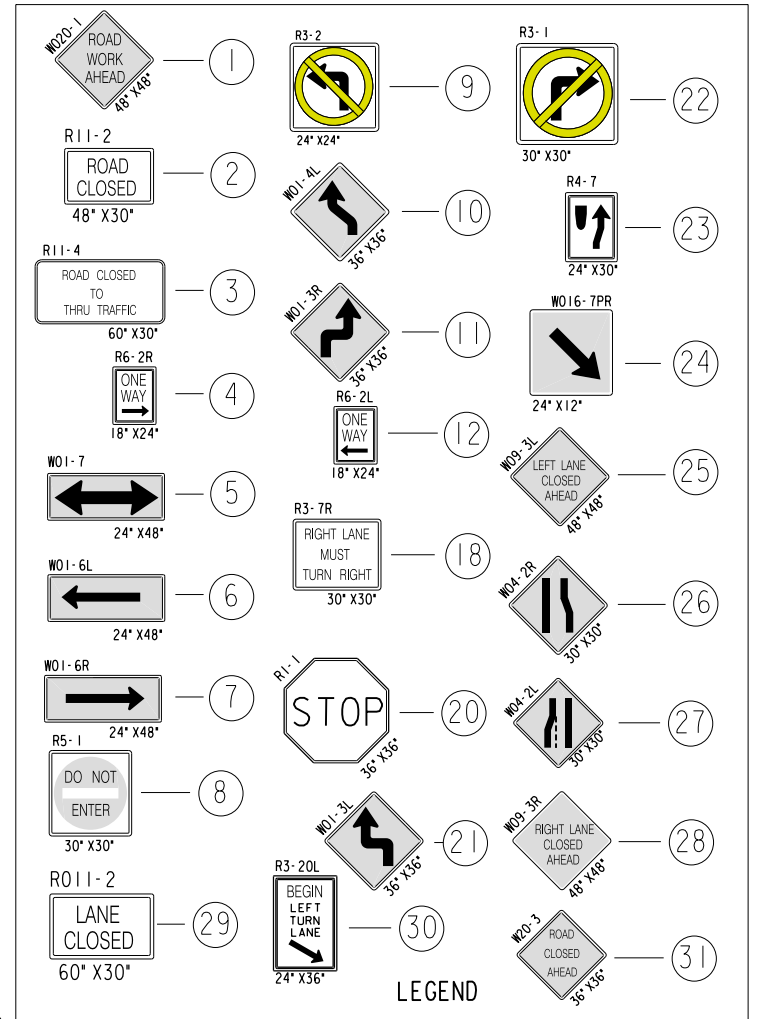
LEGEND

- DRUMS W/LIGHTS
30' SPACING ● — (13)
- TYPE III
BARRICADES ++ — (14)
- TYPE III BARRICADES
W/ SIGN + — (14) + (X)

- SIGNS BANDED
TO UTILITY POLE ●
- WORK AREA ▨
- DIRECTION OF
TRAFFIC ⇄

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES
UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING
PAVEMENT MARKINGS.

- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TUBULAR MARKERS 25' SPACING ●
- (F) TPM, REFLECTIVE PAINT, 4" YELLOW
- (G) TPM, REMOVABLE TAPE, 4" YELLOW
- (K) TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE
- (R) TPM PAVEMENT MARKING WORDS REMOVABLE TAPE
- (X) TPM, REFLECTIVE PAINT, 24" WHITE
- (Y) TPM, REMOVABLE TAPE, 24" WHITE
- (M) MATCH TO EXISTING

•14 + •28 @ N. YOUNG ST.
& E. MENOMONEE ST.•14 + •1 @ N. MILWAUKEE ST.
& E. CHICAGO ST.

•14 + •27 @ E. ERIE ST. & N. MILWAUKEE ST.

•14 + •1 @ E. ERIE ST. & N. JEFFERSON ST.

SHEET 5 OF 26

STATE PROJECT NUMBER: 1302-00-71,73

HWY. STH 32 & LOCAL

COUNTY: MILWAUKEE

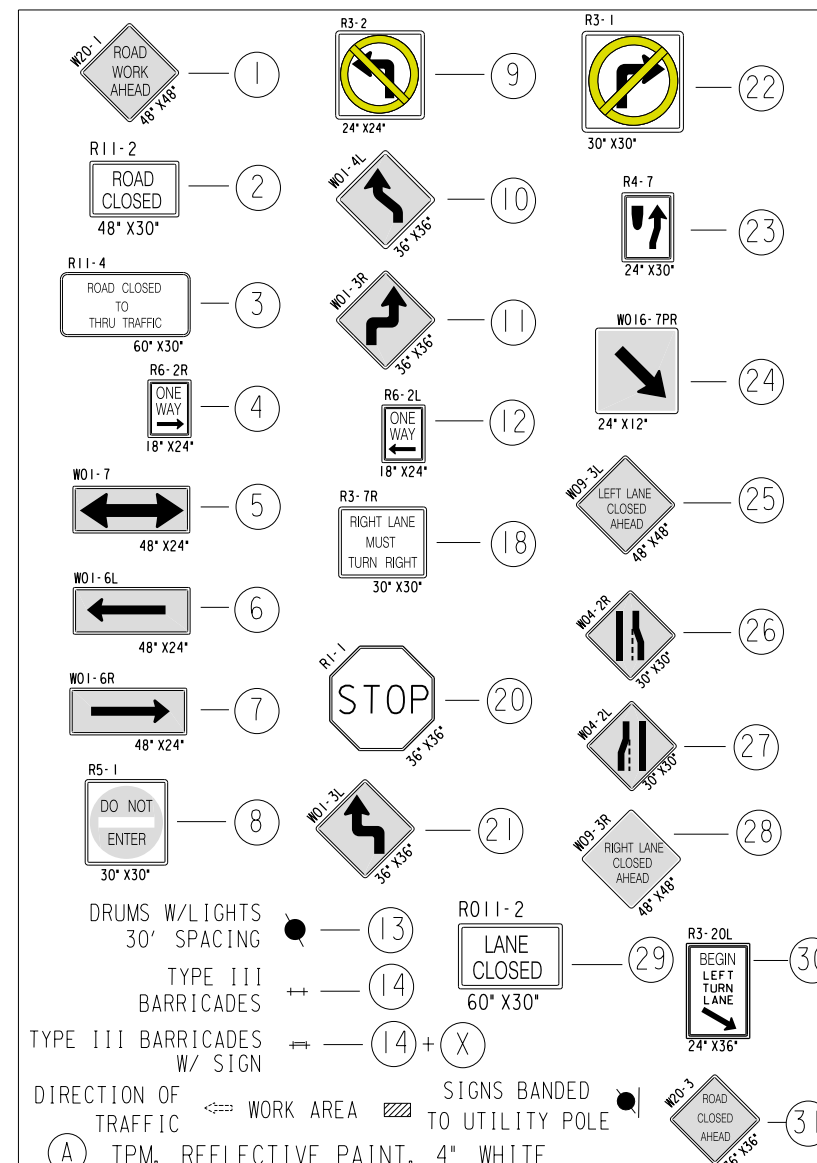
TRAFFIC CONTROL

SCALE FEET 0' 80'

SHEET NO:

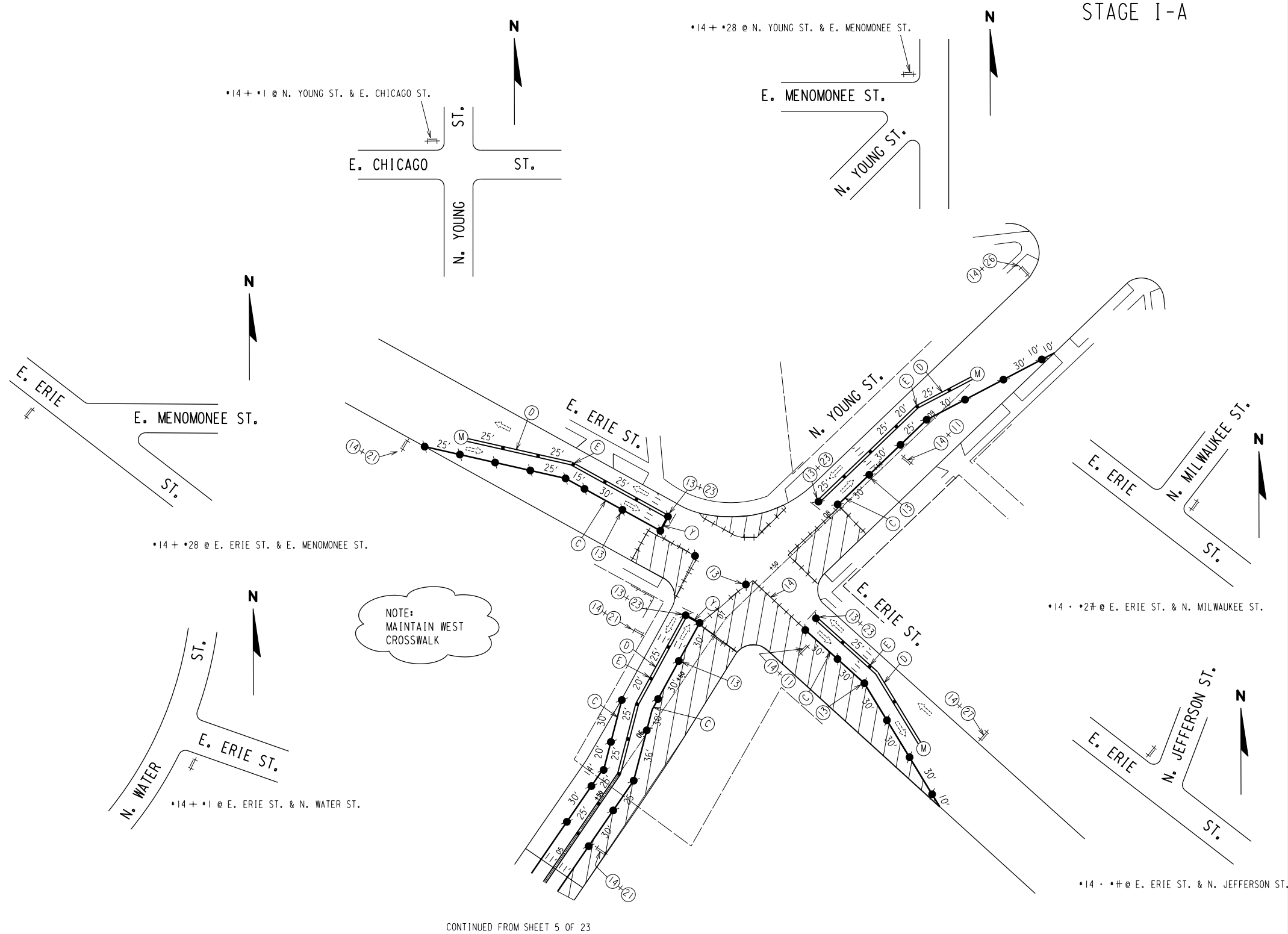
E

LEGEND



- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TUBULAR MARKERS 25' SPACING ●
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- (G) TPM, REMOVABLE TAPE, 4" YELLOW
- (K) TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE
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- (X) TPM, REFLECTIVE PAINT, 24" WHITE
- (Y) TPM, REMOVABLE TAPE, 24" WHITE
- (M) MATCH TO EXISTING

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
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UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING
PAVEMENT MARKINGS.



STAGE I-A

LEGEND

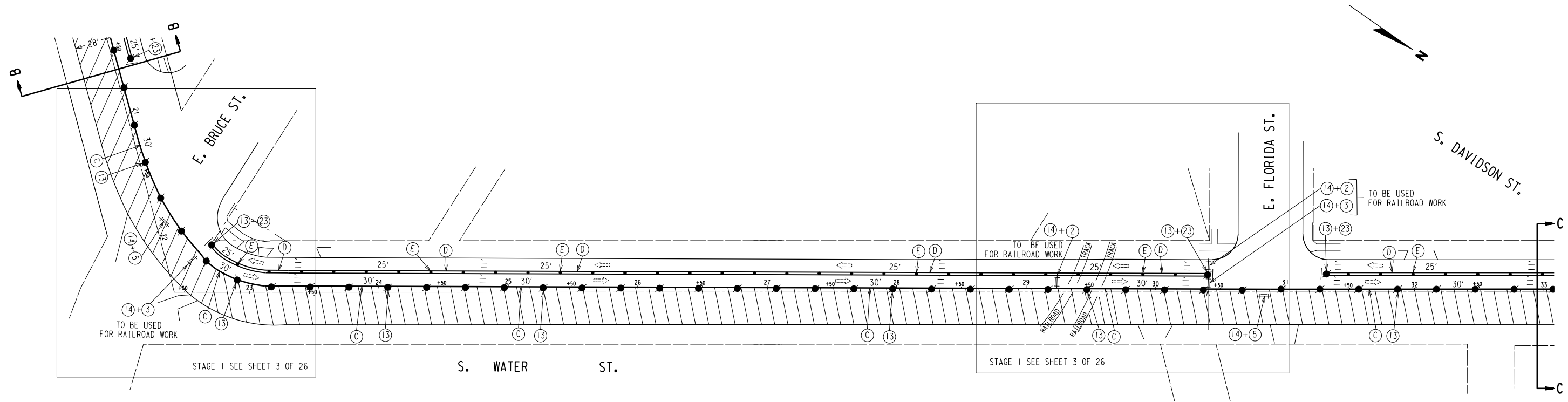
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	2		10		23
	3		11		24
	4		12		25
	5		18		26
	6		20		27
	7		21		28
	8		29		30
DRUMS W/LIGHTS 30' SPACING	13				31
TYPE III BARRICADES	14				
TYPE III BARRICADES W/ SIGN	14 + X				

DIRECTION OF TRAFFIC: WORK AREA: SIGNS BANNED TO UTILITY POLE:

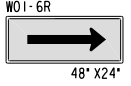
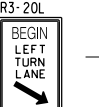
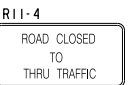
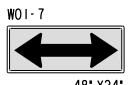
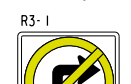
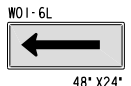
(A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TUBULAR MARKERS 25' SPACING
(F) TPM, REFLECTIVE PAINT, 4" YELLOW
(G) TPM, REMOVABLE TAPE, 4" YELLOW
(K) TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE
(R) TPM PAVEMENT MARKING WORDS REMOVABLE TAPE
(X) TPM, REFLECTIVE PAINT, 24" WHITE
(Y) TPM, REMOVABLE TAPE, 24" WHITE
(M) MATCH TO EXISTING

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
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CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STAGE I-A

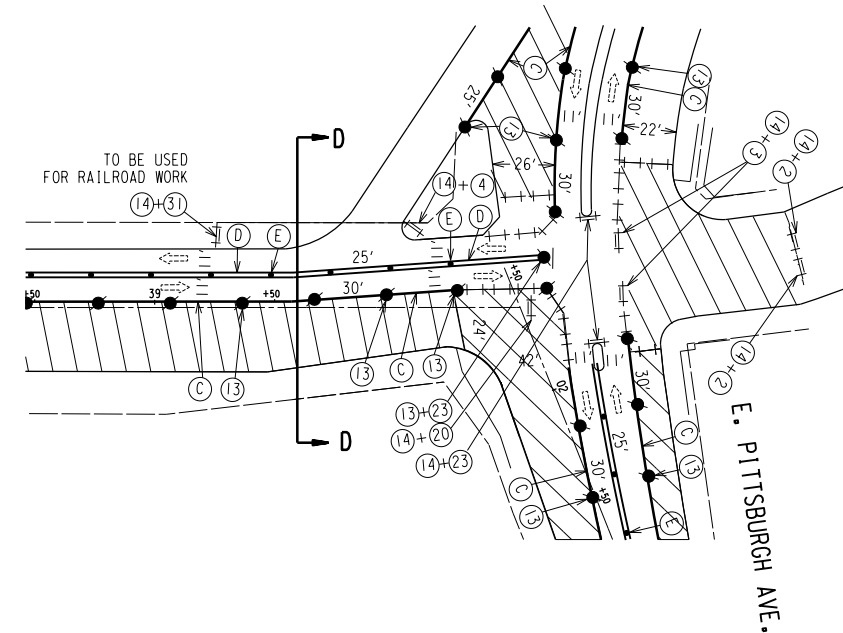
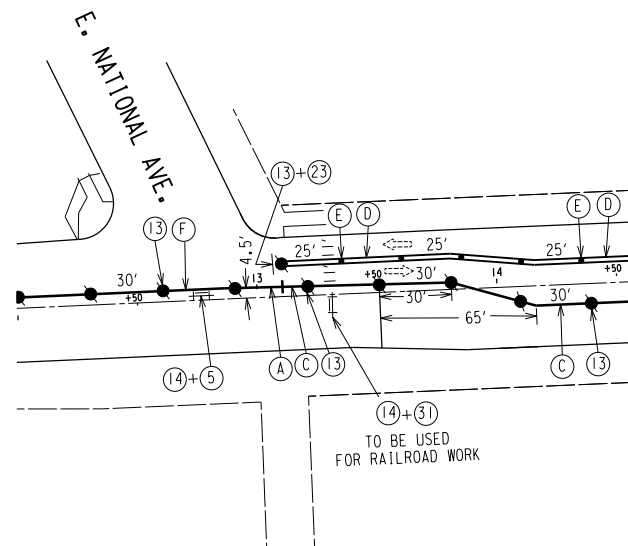


LEGEND

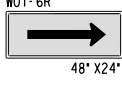
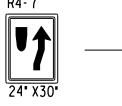
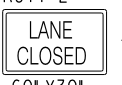
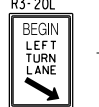
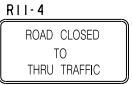
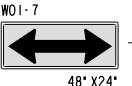
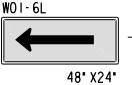
 1	 7	 12	 23	 28	 29
 2	 8	 18	 24	 30	 31
 3	 9	 20	 25	 13	
 4	 10	 21	 26	 14	
 5	 11	 22	 27	 14+X	
 6				 13	
				 14	

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY. ALL SIGNS SHALL BE Banded TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED. CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STAGE I-A



LEGEND

 1	 7	 12	 23	 28	 29	(A) TPM, REFLECTIVE PAINT, 4" WHITE
 2	 8	 18	 24	 30	 31	(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
 3	 9	 20	 25	 13		(C) TPM, REMOVABLE TAPE, 4" WHITE
 4	 10	 21	 26	 14		(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
 5	 11	 22	 27	 14 + (X)		(E) TUBULAR MARKERS 25' SPACING ●
 6				 13		(F) TPM, REFLECTIVE PAINT, 4" YELLOW
				 13		(G) TPM, REMOVABLE TAPE, 4" YELLOW
				 13		(K) TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE
						(R) TPM PAVEMENT MARKING WORDS REMOVABLE TAPE
						(X) TPM, REFLECTIVE PAINT, 24" WHITE
						(Y) TPM, REMOVABLE TAPE, 24" WHITE
						(M) MATCH TO EXISTING

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
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SHEET 9 OF 26

STATE PROJECT NUMBER: 1302-00-71, 73

HWY. STH 32 & LOCAL

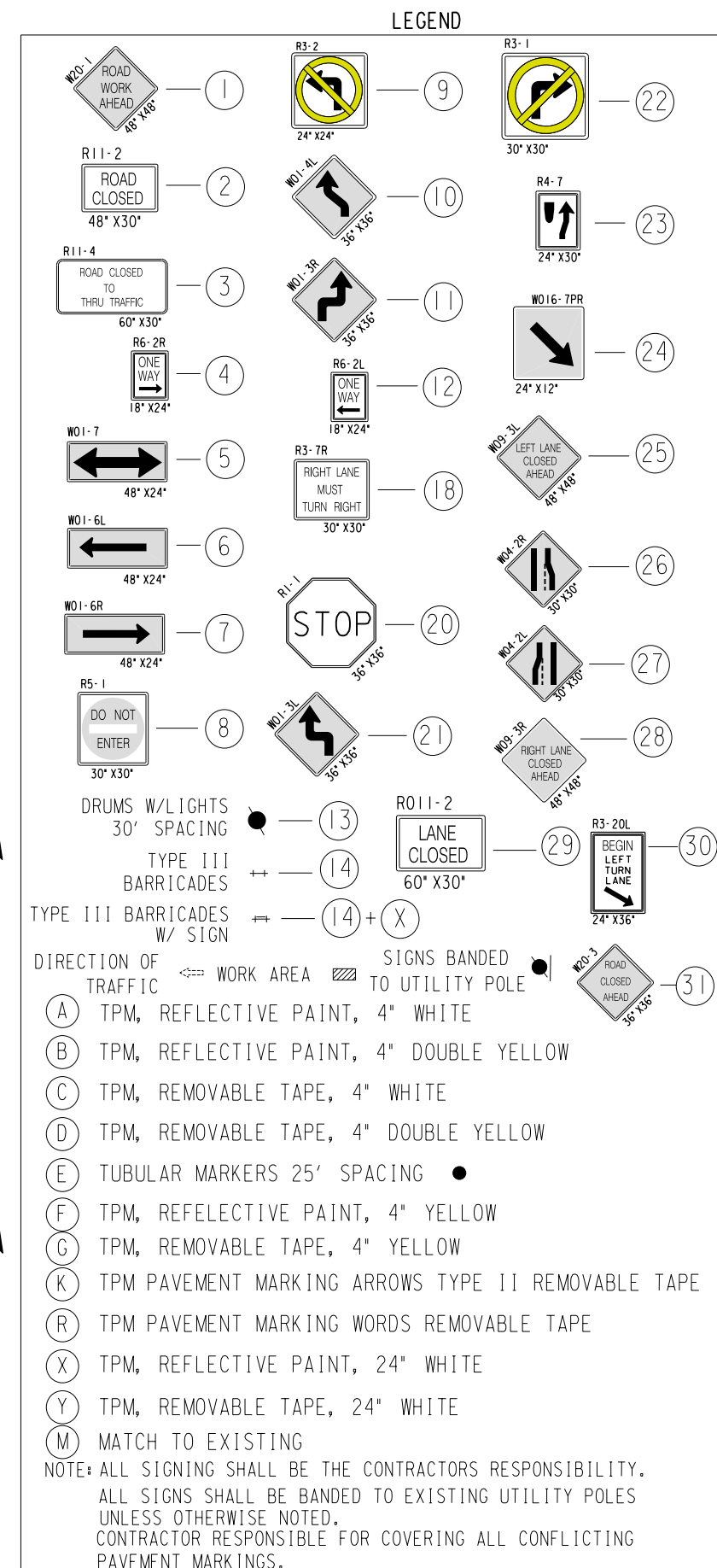
COUNTY: MILWAUKEE

TRAFFIC CONTROL

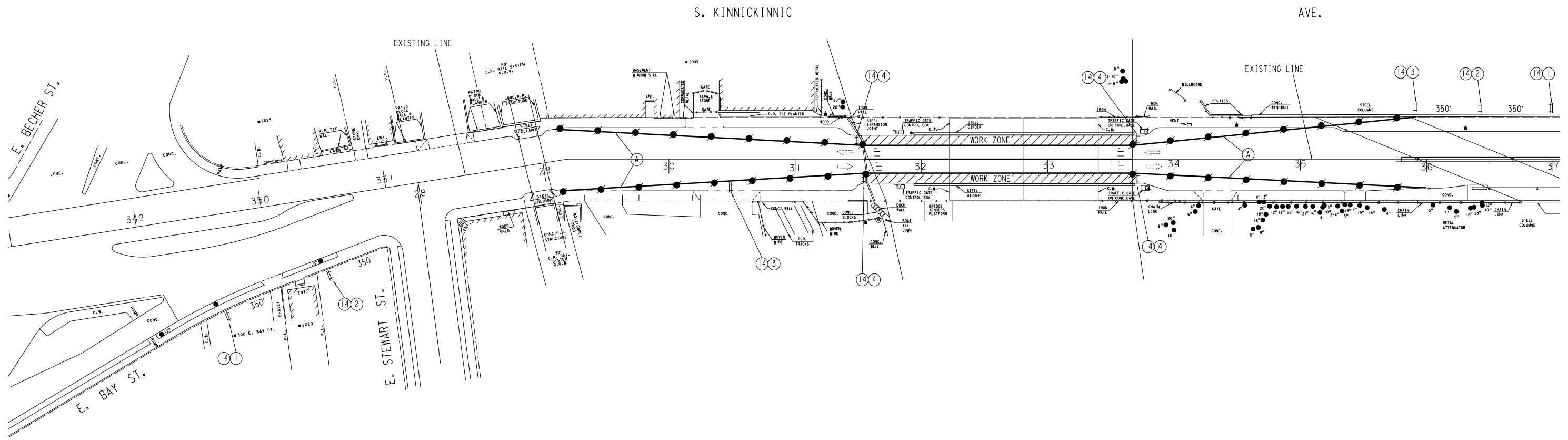
SCALE FEET 0' 80'

SHEET NO:

E

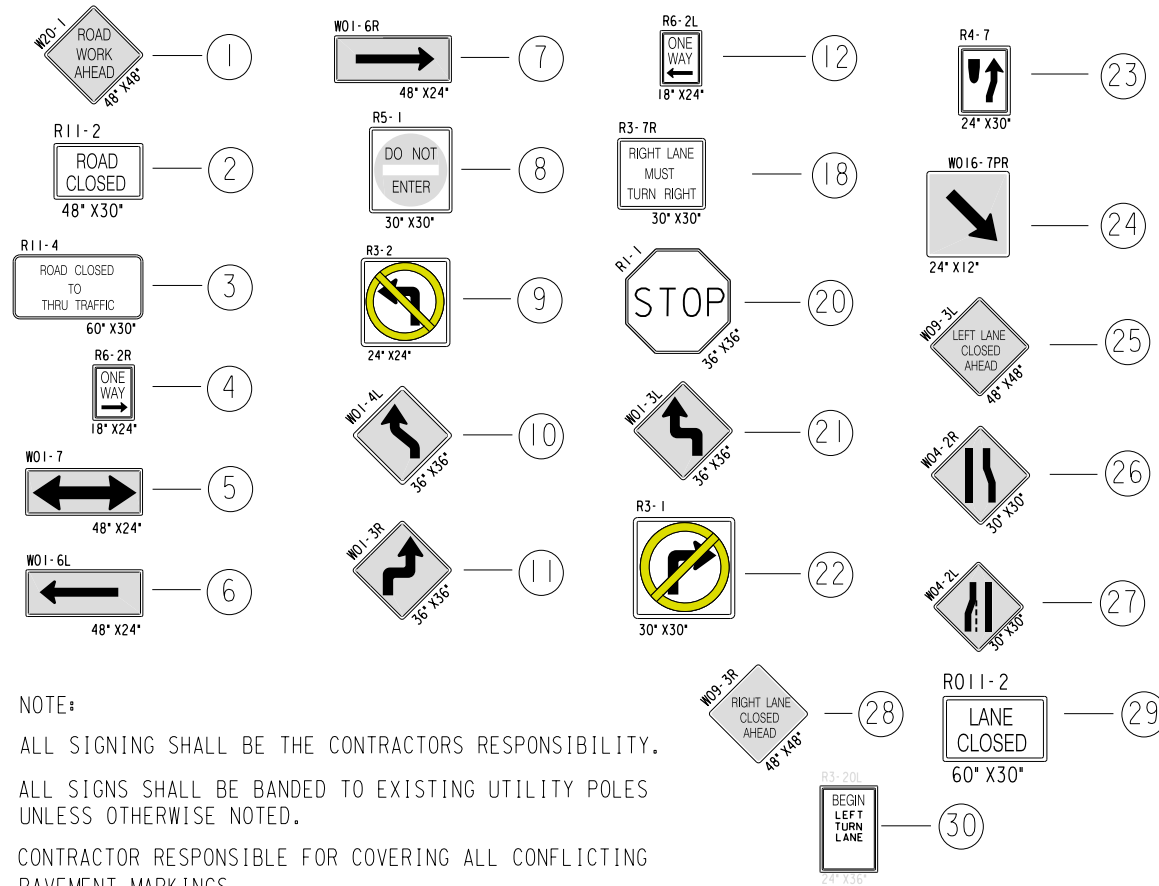
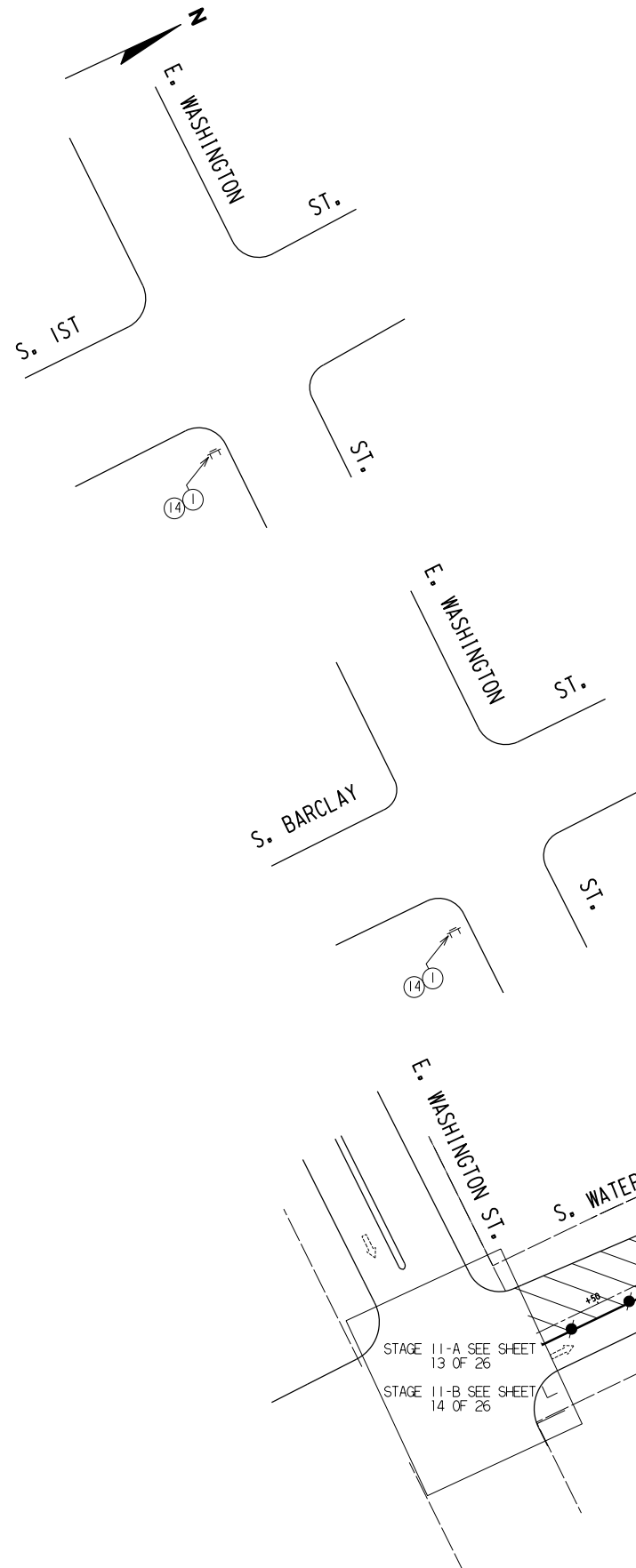


STAGE I



TRAFFIC CONTROL LEGEND

- ⚡ (14)+(X) TYPE III BARRICADE WITH ATTACHED SIGN, WITH TYPE A FLASHING LIGHTS
- ① ROAD WORK AHEAD
- ② RIGHT (BIKE) LANE CLOSED
- ③ LEFT ARROW
- ④ LANE CLOSED
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT (30' SPACING UNLESS NOTED)
- Ⓐ TPM REMOVABLE TAPE, 4" WHITE
- ▨ WORK AREA



NOTE:
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UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING
PAVEMENT MARKINGS.

LEGEND

- DRUMS W/LIGHTS
30' SPACING ● (13)
- TYPE III
BARRICADES ++ (14)
- TYPE III BARRICADES
W/ SIGN ++ (14) + (X)
- SIGNS Banded
TO UTILITY POLE ● |
- WORK AREA ▨
- DIRECTION OF
TRAFFIC ⇄
- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TUBULAR MARKERS 25' SPACING ●
- (F) TPM, REFLECTIVE PAINT, 4" YELLOW
- (G) TPM, REMOVABLE TAPE, 4" YELLOW
- (K) TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE
- (R) TPM PAVEMENT MARKING WORDS REMOVABLE TAPE
- (X) TPM, REFLECTIVE PAINT, 24" WHITE
- (Y) TPM, REMOVABLE TAPE, 24" WHITE
- (M) MATCH TO EXISTING

STAGE II

SHEET 12 OF 26

STATE PROJECT NUMBER: 1302-00-71,73

HWY. STH 32 & LOCAL

COUNTY: MILWAUKEE

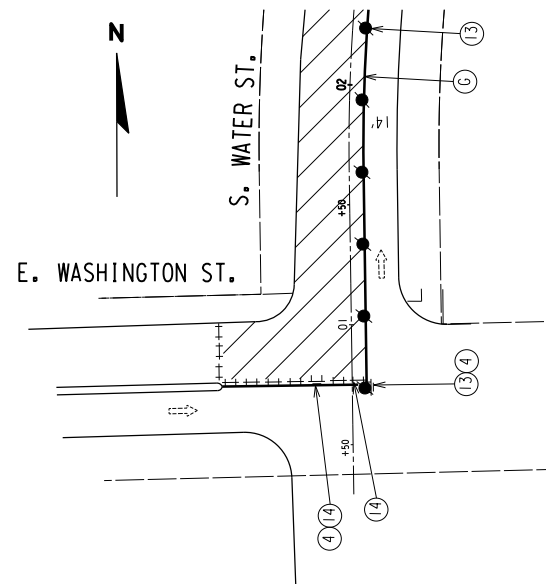
TRAFFIC CONTROL

SCALE FEET 0' 80'

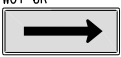
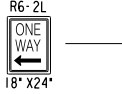
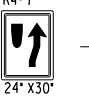
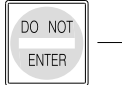
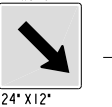
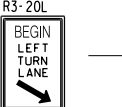
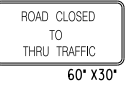
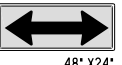
SHEET NO:

E

STAGE II- A



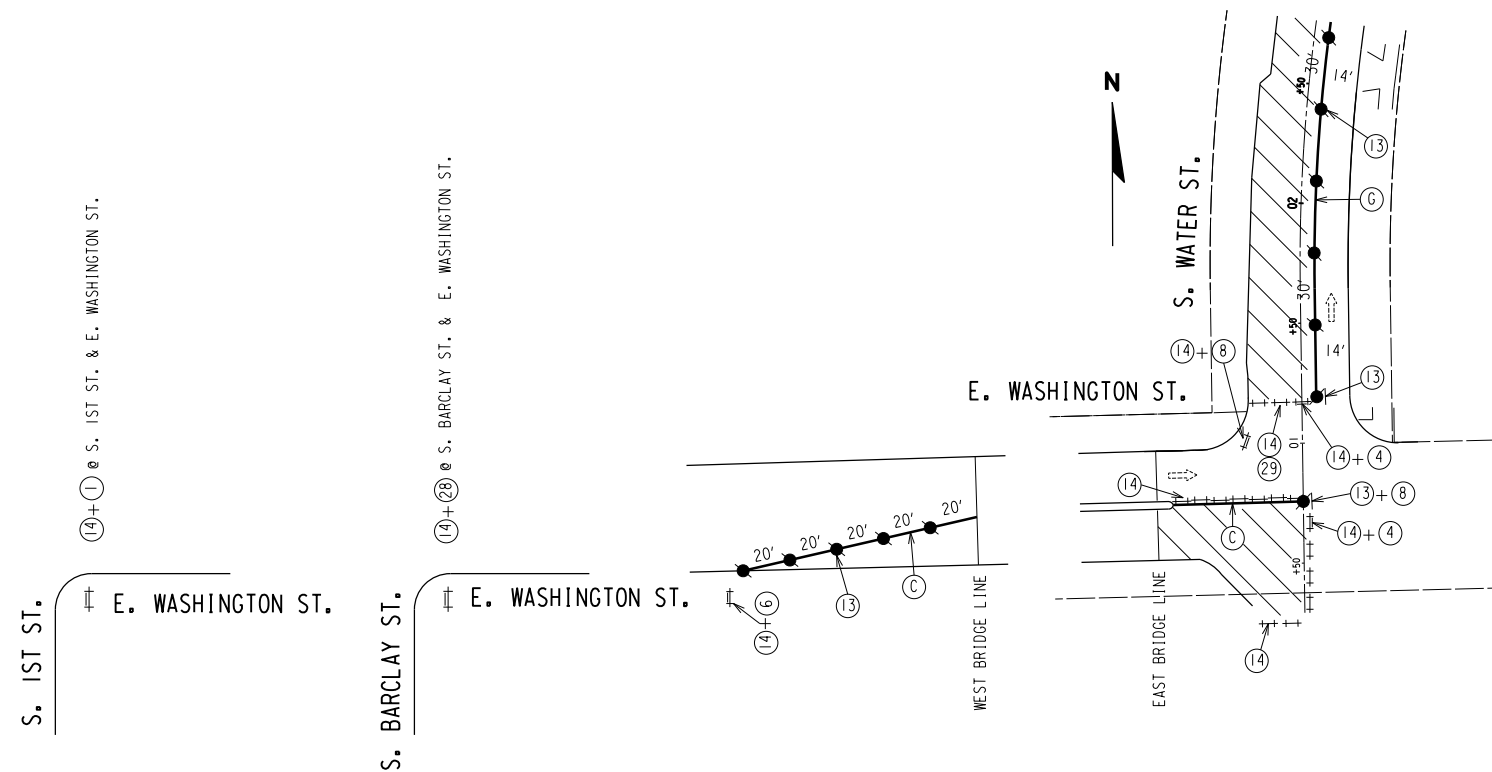
LEGEND

 1	 7	 12	 23	 28	 29	(A) TPM, REFLECTIVE PAINT, 4" WHITE
 2	 8	 18	 24	 30		(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
 3	 9	 20	 25	 13		(C) TPM, REMOVABLE TAPE, 4" WHITE
 4	 10	 21	 26	 14		(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
 5	 11	 22	 27	 14 + (X)		(E) TUBULAR MARKERS 25' SPACING ●
 6				 14 + (X)		(F) TPM, REFLECTIVE PAINT, 4" YELLOW
				 14 + (X)		(G) TPM, REMOVABLE TAPE, 4" YELLOW
				 14 + (X)		(K) TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE
						(R) TPM PAVEMENT MARKING WORDS REMOVABLE TAPE
						(X) TPM, REFLECTIVE PAINT, 24" WHITE
						(Y) TPM, REMOVABLE TAPE, 24" WHITE
						(M) MATCH TO EXISTING

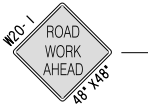
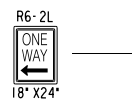
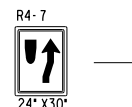
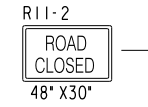
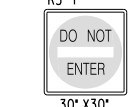
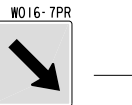
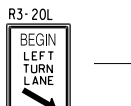
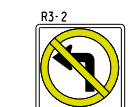
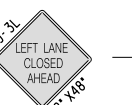
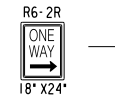
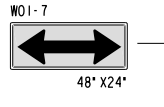
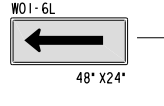
NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
ALL SIGNS SHALL BE Banded TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

SHEET 13 OF 26

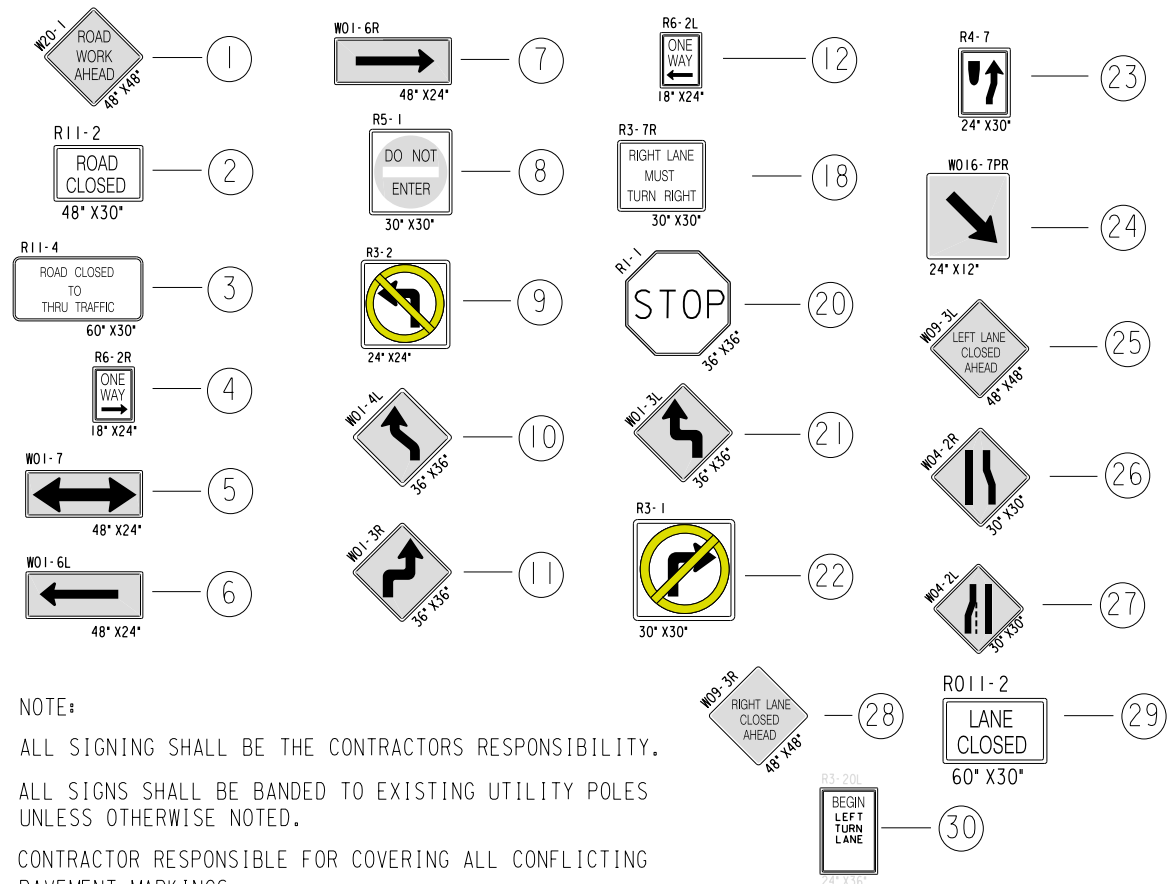
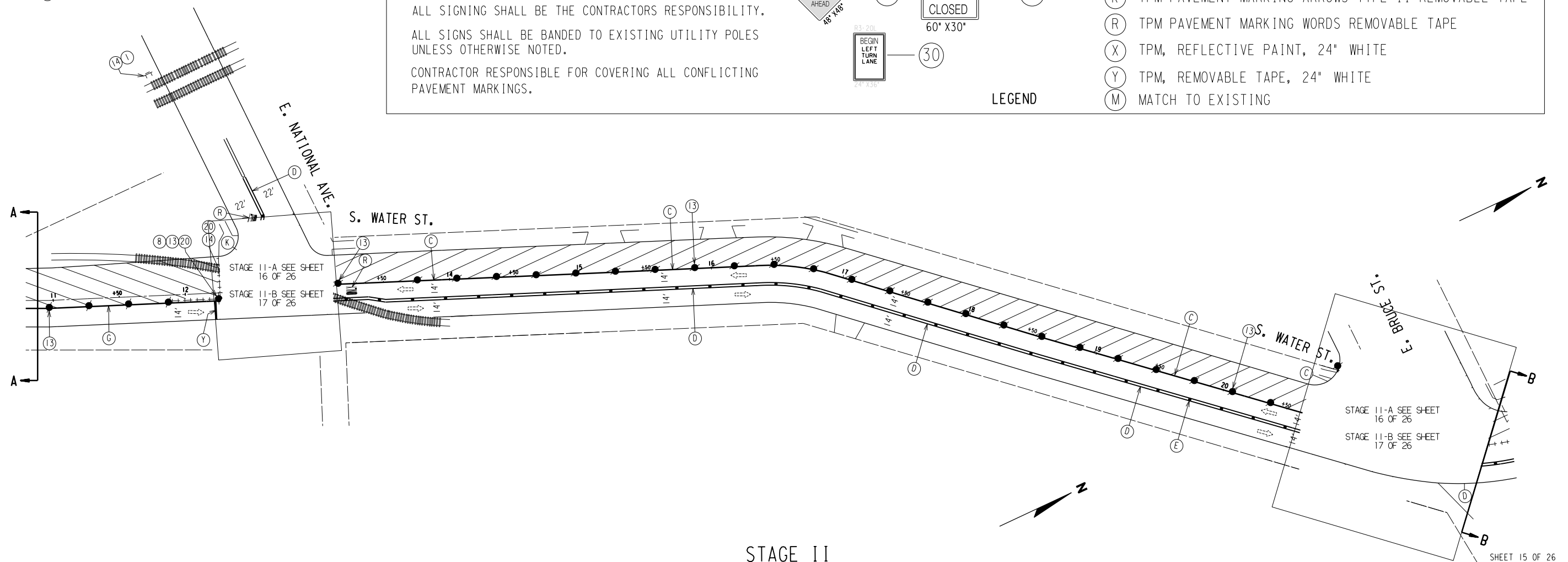
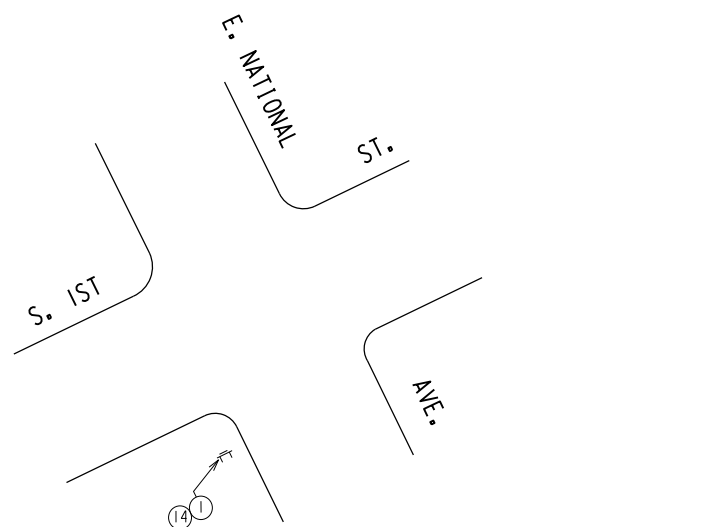
STAGE II- B



LEGEND

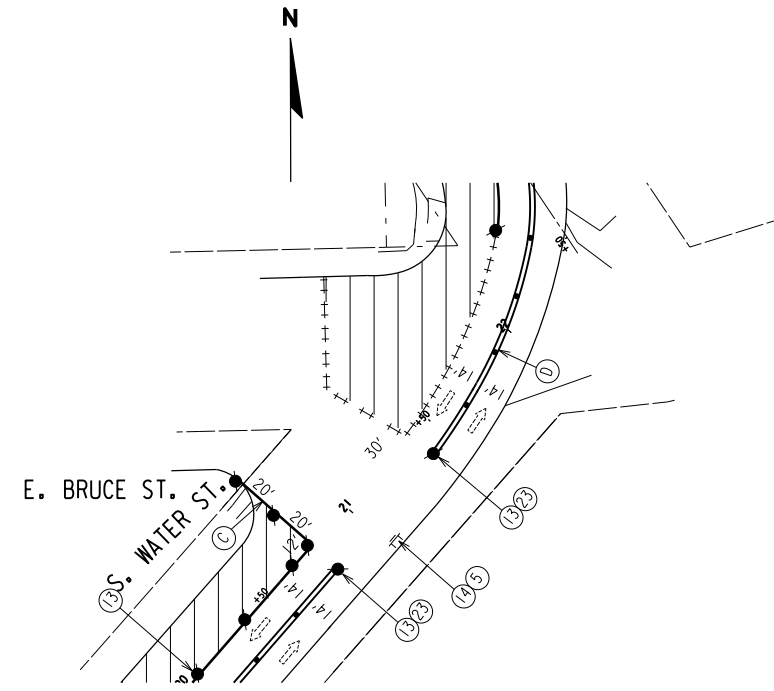
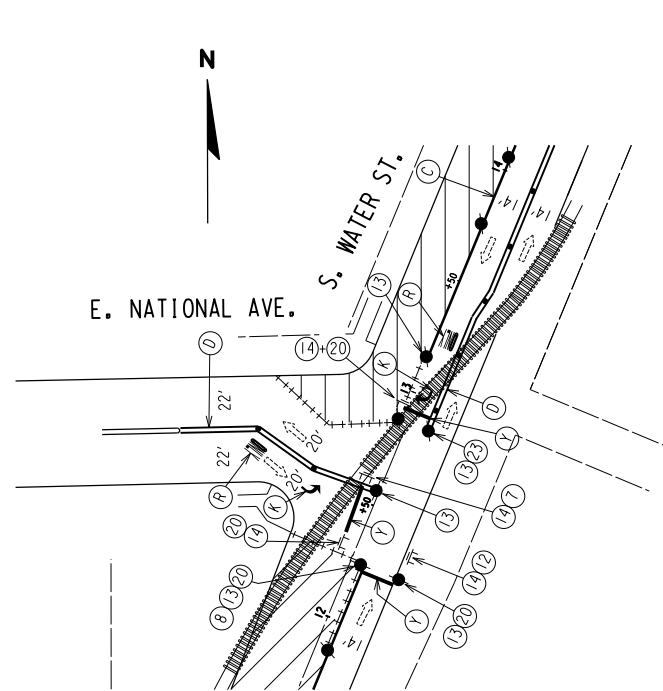
						(A) TPM, REFLECTIVE PAINT, 4" WHITE
						(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
						(C) TPM, REMOVABLE TAPE, 4" WHITE
						(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
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						(F) TPM, REFLECTIVE PAINT, 4" YELLOW
						(G) TPM, REMOVABLE TAPE, 4" YELLOW
						(K) TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE
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						(X) TPM, REFLECTIVE PAINT, 24" WHITE
						(Y) TPM, REMOVABLE TAPE, 24" WHITE
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SHEET 14 OF 26

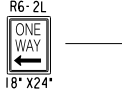
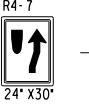
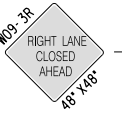
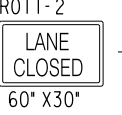
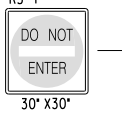
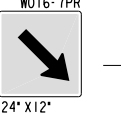
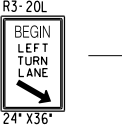
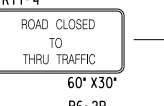
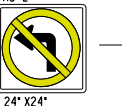
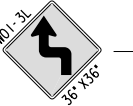
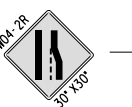
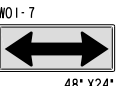
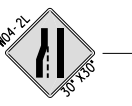
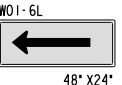


- DRUMS W/LIGHTS
30' SPACING ● — (13)
- TYPE III
BARRICADES ++ — (14)
- TYPE III BARRICADES
W/ SIGN ++ — (14) + (X)
- SIGNS BANDED
TO UTILITY POLE ● |
- WORK AREA ▨
- DIRECTION OF
TRAFFIC ⇄
- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TUBULAR MARKERS 25' SPACING ●
- (F) TPM, REFLECTIVE PAINT, 4" YELLOW
- (G) TPM, REMOVABLE TAPE, 4" YELLOW
- (K) TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE
- (R) TPM PAVEMENT MARKING WORDS REMOVABLE TAPE
- (X) TPM, REFLECTIVE PAINT, 24" WHITE
- (Y) TPM, REMOVABLE TAPE, 24" WHITE
- (M) MATCH TO EXISTING

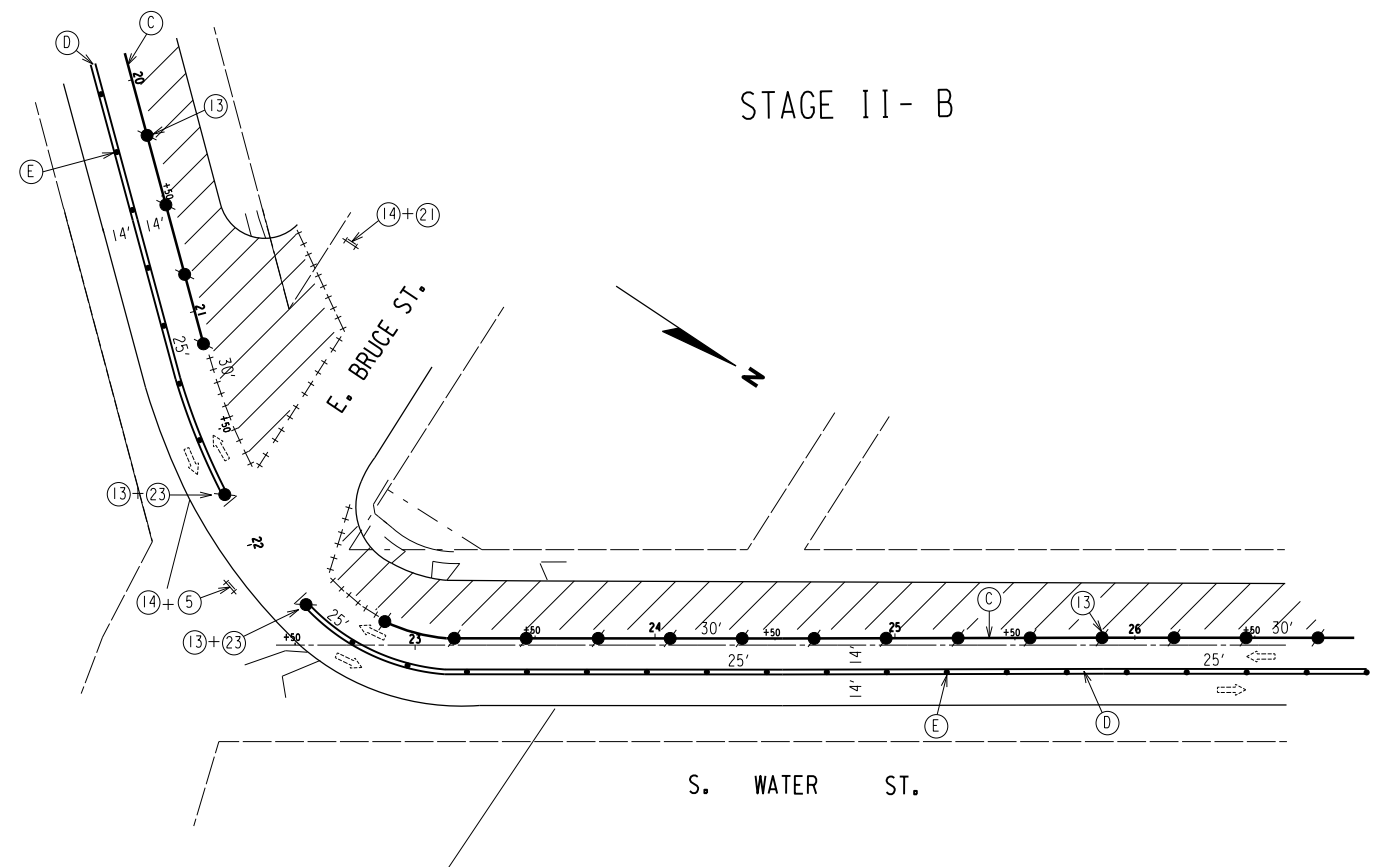
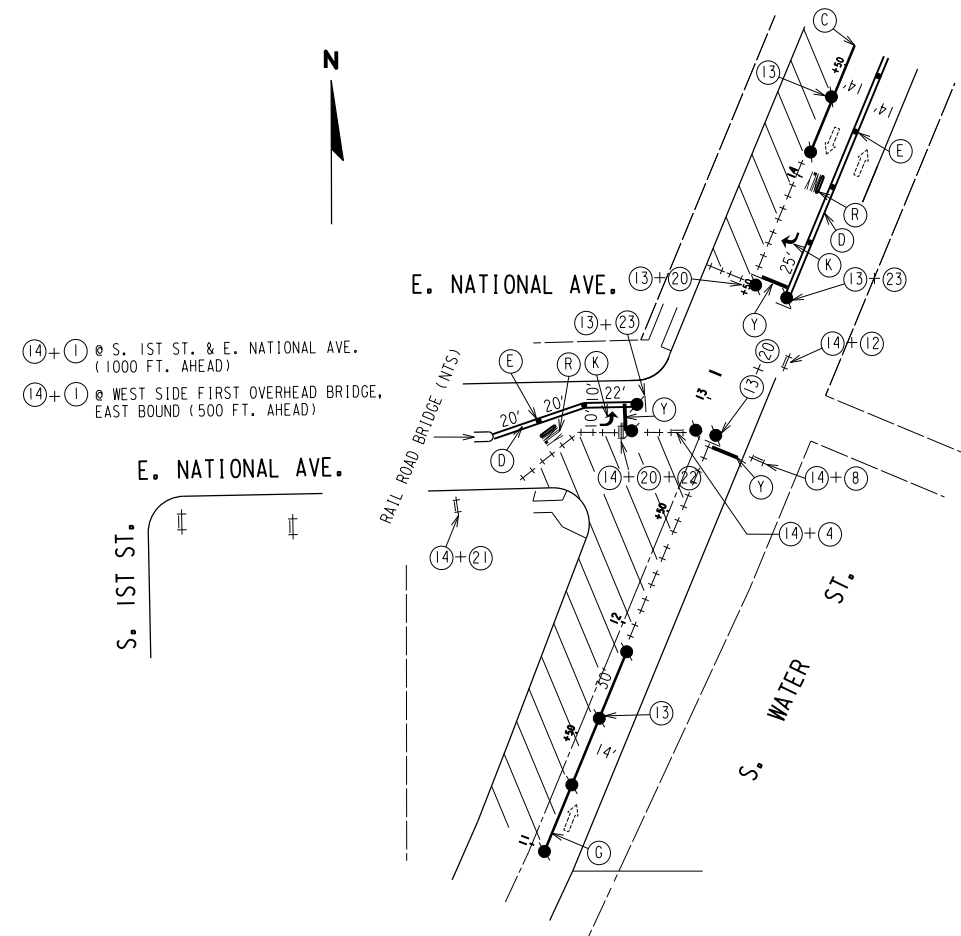
STAGE II- A



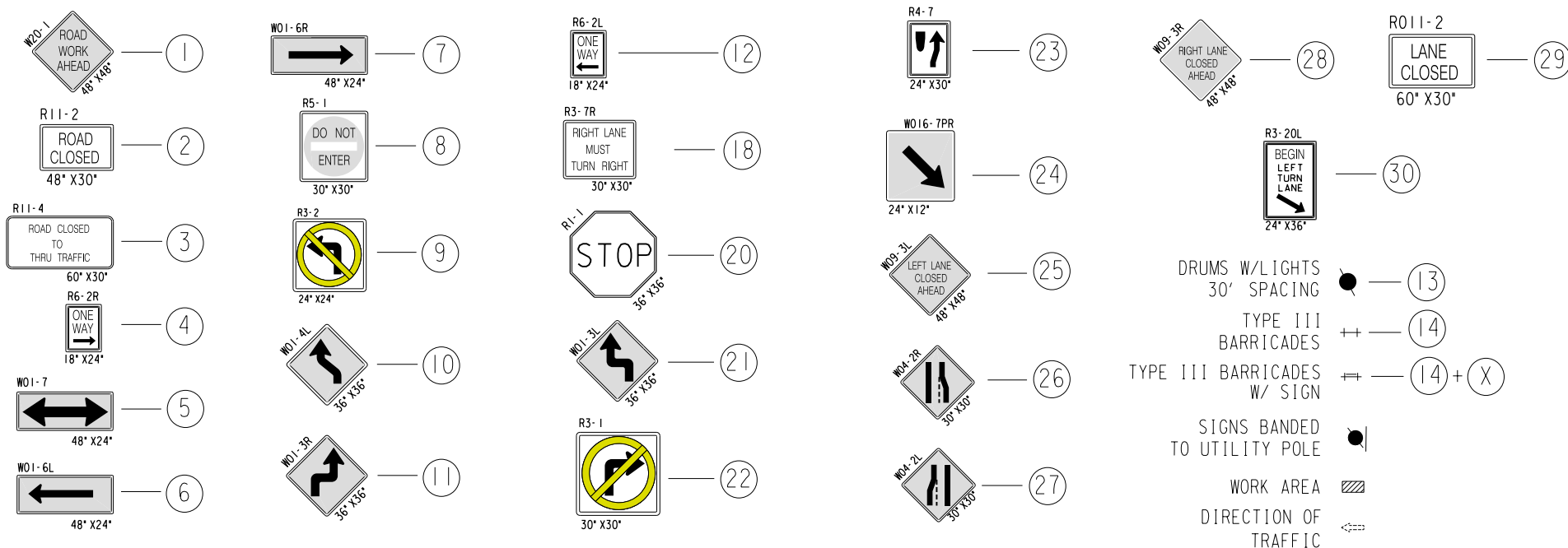
LEGEND

	1		7		12		23		28		29	(A) TPM, REFLECTIVE PAINT, 4" WHITE
	2		8		18		24		30			(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
	3		9		20		25					(C) TPM, REMOVABLE TAPE, 4" WHITE
	4		10		21		26	DRUMS W/LIGHTS 30' SPACING		13		(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
	5		11		22		27	TYPE III BARRICADES		14		(E) TUBULAR MARKERS 25' SPACING
	6							TYPE III BARRICADES W/ SIGN		(14) + (X)		(F) TPM, REFLECTIVE PAINT, 4" YELLOW
								SIGNS BANDED TO UTILITY POLE				(G) TPM, REMOVABLE TAPE, 4" YELLOW
								WORK AREA				(K) TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE
								DIRECTION OF TRAFFIC				(R) TPM PAVEMENT MARKING WORDS REMOVABLE TAPE
												(X) TPM, REFLECTIVE PAINT, 24" WHITE
												(Y) TPM, REMOVABLE TAPE, 24" WHITE
												(M) MATCH TO EXISTING
												NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
												ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.
												CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

SHEET 16 OF 26

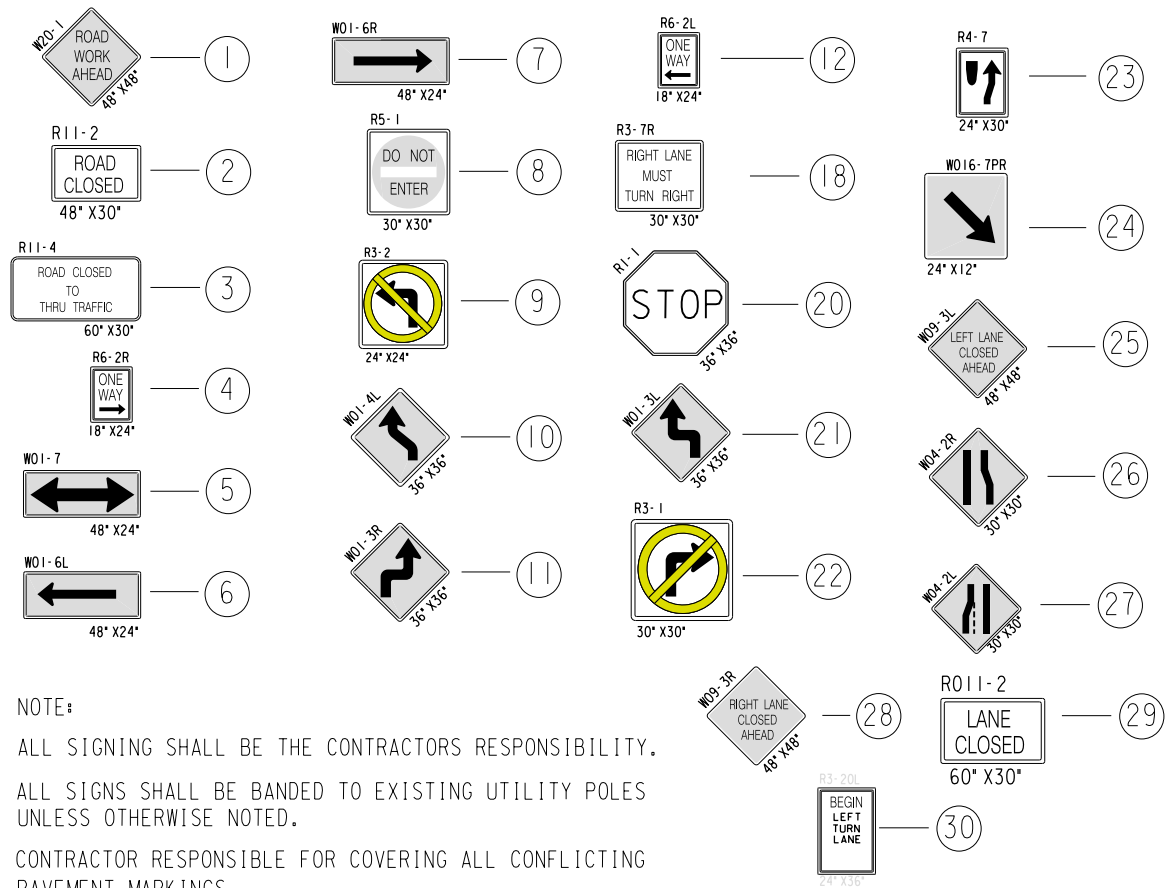


LEGEND



- (A) TPM, REFLECTIVE PAINT, 4" WHITE
(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
(C) TPM, REMOVABLE TAPE, 4" WHITE
(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
(E) TUBULAR MARKERS 25' SPACING
(F) TPM, REFLECTIVE PAINT, 4" YELLOW
(G) TPM, REMOVABLE TAPE, 4" YELLOW
(K) TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE
(R) TPM PAVEMENT MARKING WORDS REMOVABLE TAPE
(X) TPM, REFLECTIVE PAINT, 24" WHITE
(Y) TPM, REMOVABLE TAPE, 24" WHITE
(M) MATCH TO EXISTING
- NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
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CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

SHEET 17 OF 26



- DRUMS W/LIGHTS
30' SPACING ● — (13)
- TYPE III
BARRICADES ++ — (14)
- TYPE III BARRICADES
W/ SIGN ++ — (14) + (X)
- SIGNS BANDED
TO UTILITY POLE ● |
- WORK AREA ▨
- DIRECTION OF
TRAFFIC ⇄
- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TUBULAR MARKERS 25' SPACING ●
- (F) TPM, REFLECTIVE PAINT, 4" YELLOW
- (G) TPM, REMOVABLE TAPE, 4" YELLOW
- (K) TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE
- (R) TPM PAVEMENT MARKING WORDS REMOVABLE TAPE
- (X) TPM, REFLECTIVE PAINT, 24" WHITE
- (Y) TPM, REMOVABLE TAPE, 24" WHITE
- (M) MATCH TO EXISTING

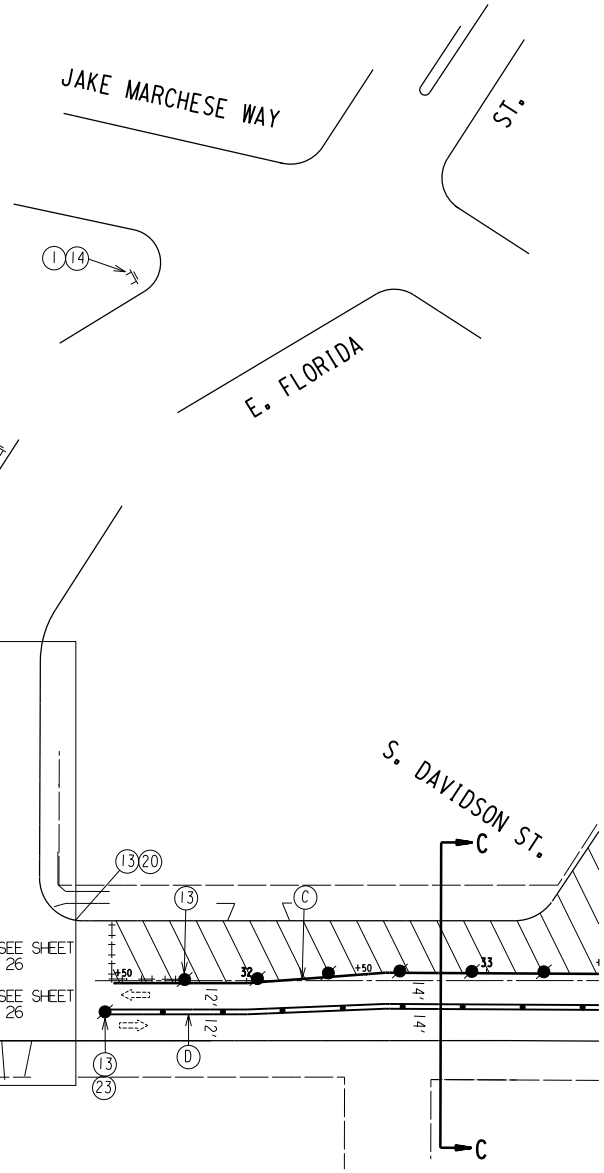
NOTE:

ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.

ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.

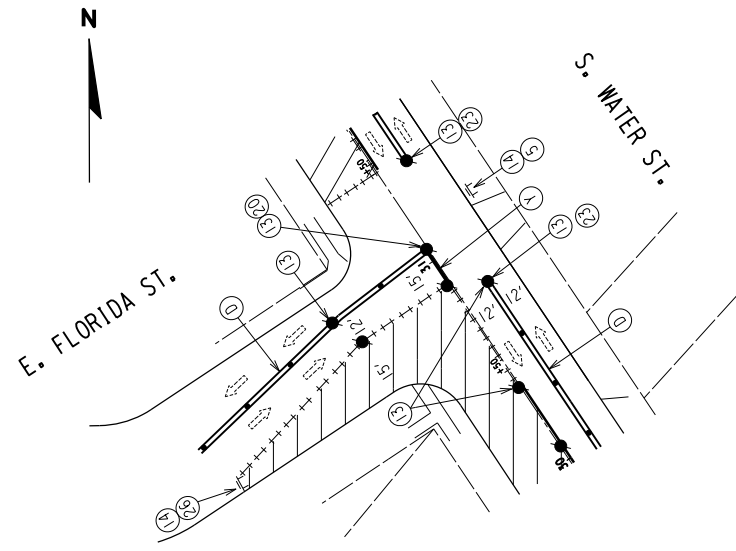
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

LEGEND

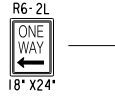
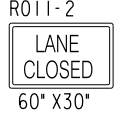
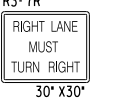
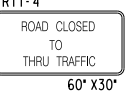
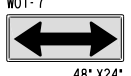
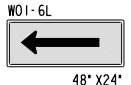


STAGE II

STAGE II- A



LEGEND

 1	 7	 12	 23	 28	 29
 2	 8	 18	 24	 30	
 3	 9	 20	 25	 13	
 4	 10	 21	 26	 14	
 5	 11	 22	 27	 14 + X	
 6				 15	
				 16	
				 17	

(A) TPM, REFLECTIVE PAINT, 4" WHITE

(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW

(C) TPM, REMOVABLE TAPE, 4" WHITE

(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW

(E) TUBULAR MARKERS 25' SPACING ●

(F) TPM, REFLECTIVE PAINT, 4" YELLOW

(G) TPM, REMOVABLE TAPE, 4" YELLOW

(K) TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE

(R) TPM PAVEMENT MARKING WORDS REMOVABLE TAPE

(X) TPM, REFLECTIVE PAINT, 24" WHITE

(Y) TPM, REMOVABLE TAPE, 24" WHITE

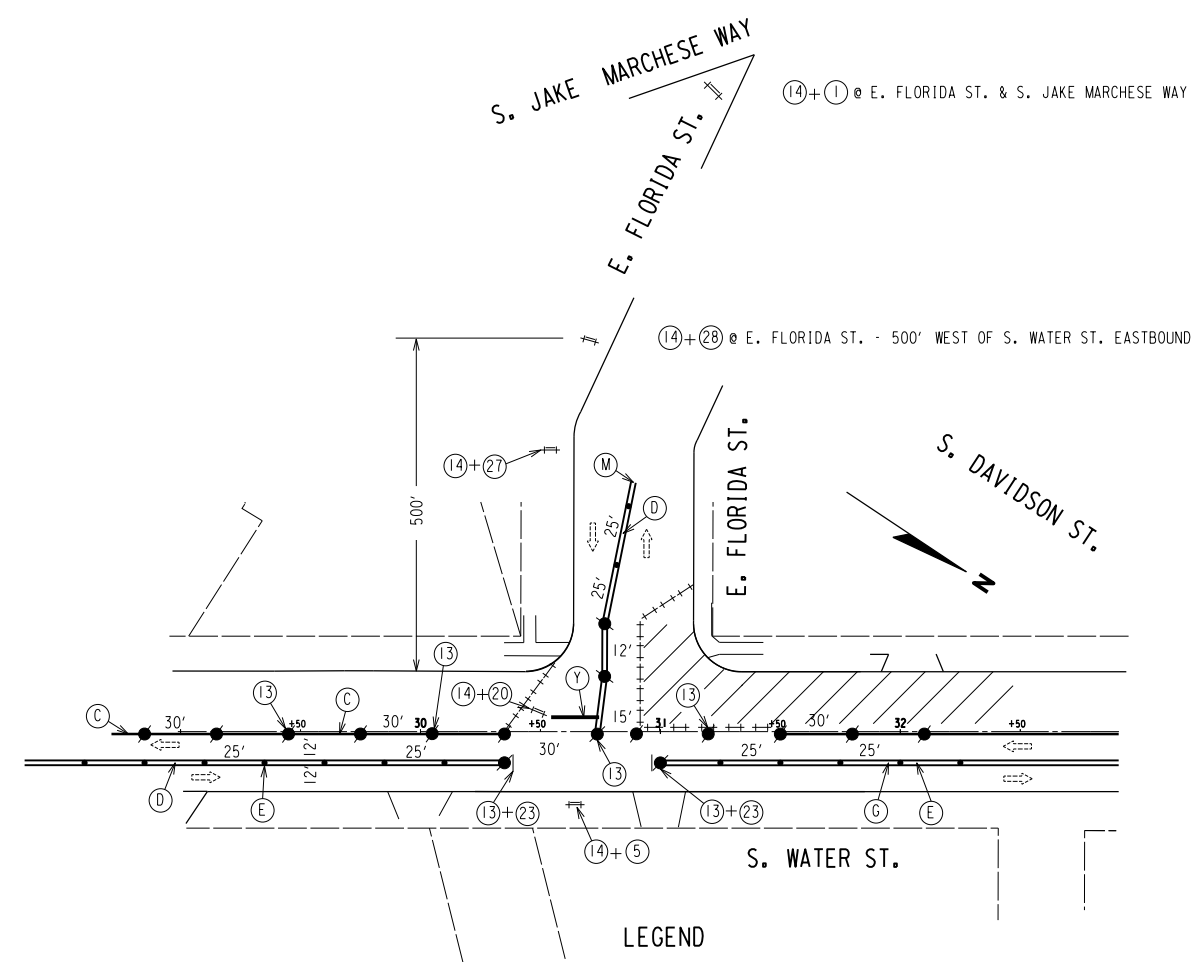
(M) MATCH TO EXISTING

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.

ALL SIGNS SHALL BE Banded TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.

CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STAGE II- B

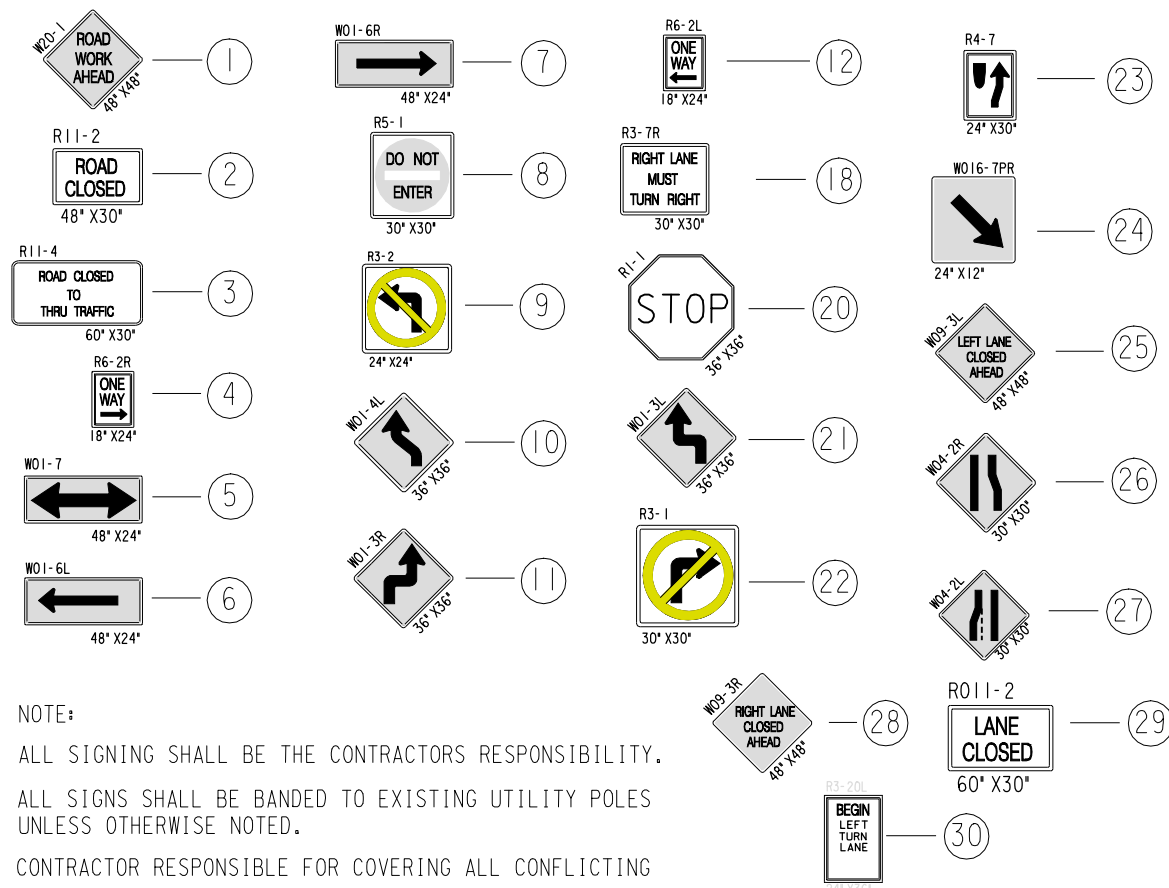
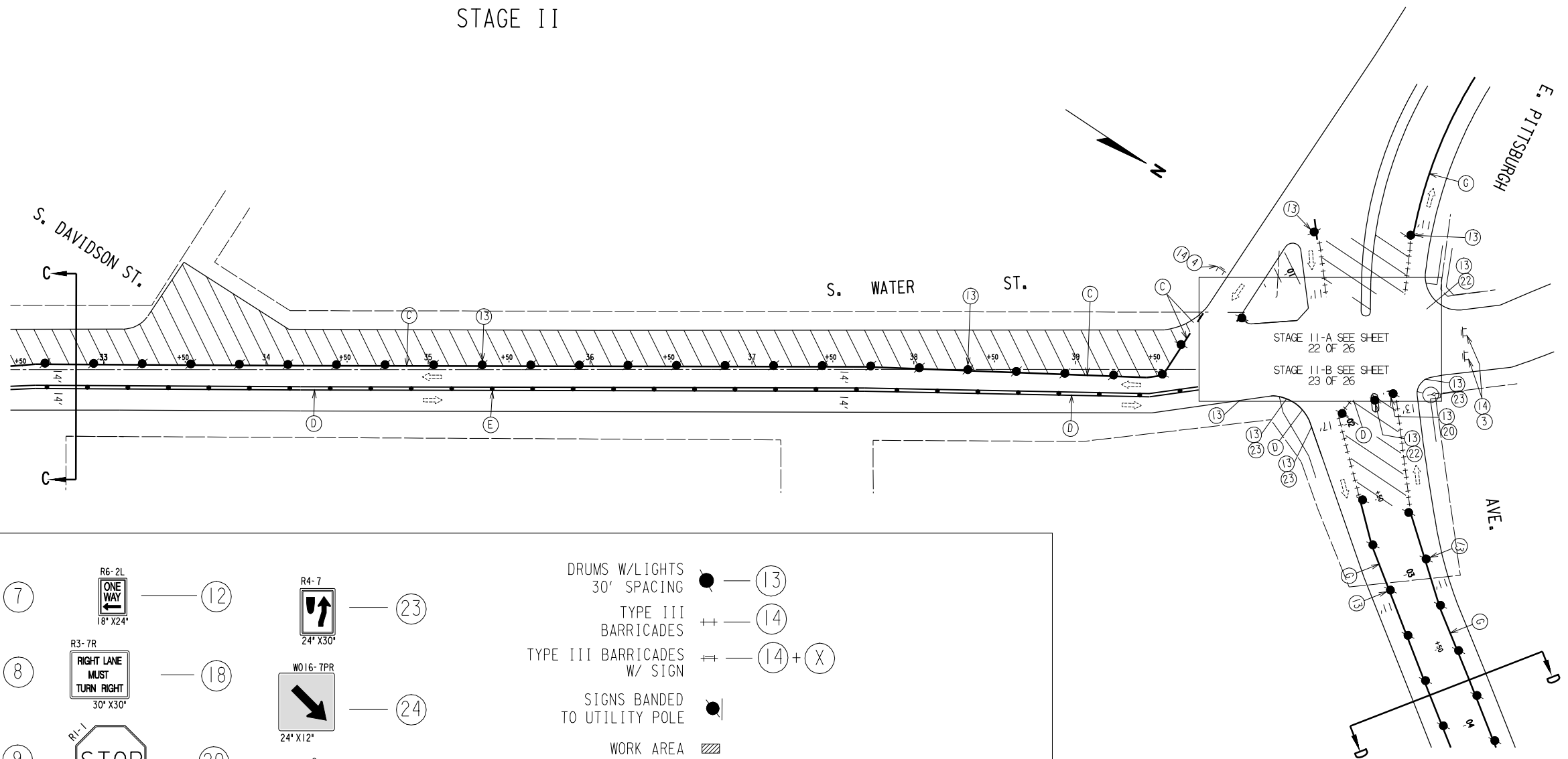


LEGEND

①	⑦	⑫	⑫	⑫	⑫
②	⑧	⑮	⑮	⑮	
③	⑨	⑳	⑮	⑬	
④	⑩	⑮	⑮	⑭	
⑤	⑪	⑮	⑮	⑮	
⑥				⑭+⑩	

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STAGE II



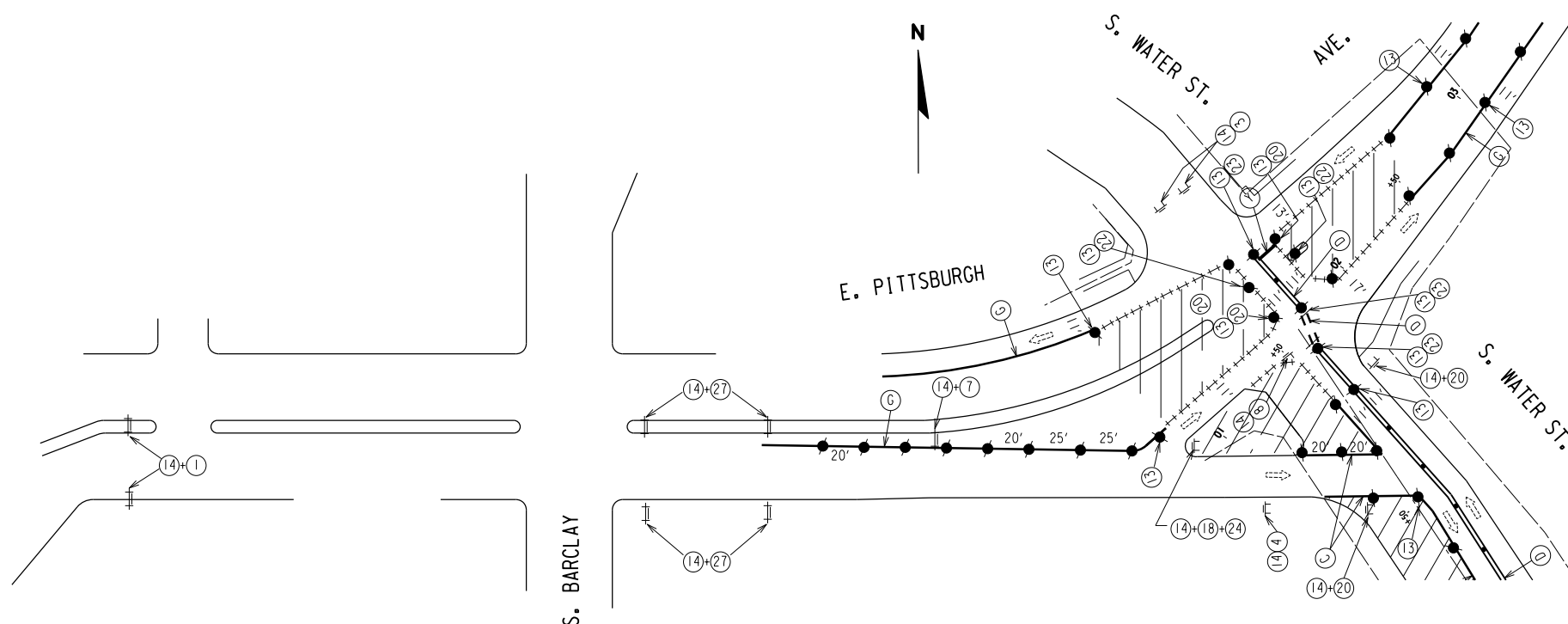
NOTE:
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UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING
PAVEMENT MARKINGS.

LEGEND

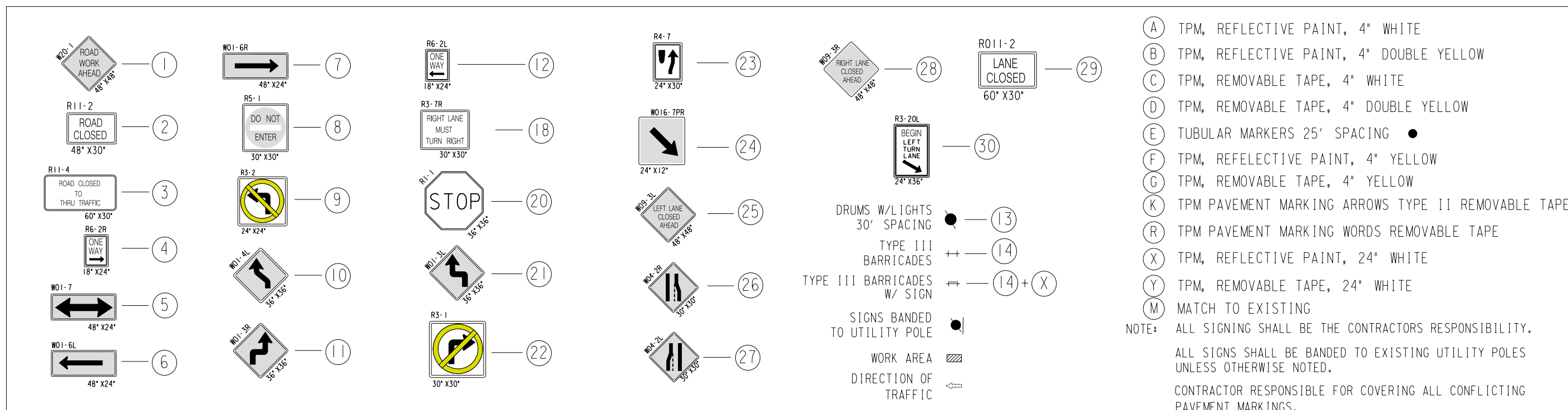
- DRUMS W/LIGHTS
30' SPACING ● — (13)
- TYPE III
BARRICADES ++ — (14)
- TYPE III BARRICADES
W/ SIGN ++ — (14) + (X)
- SIGNS Banded
TO UTILITY POLE ● — (14) + (X)
- WORK AREA ▨
- DIRECTION OF
TRAFFIC ⇄
- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TUBULAR MARKERS 25' SPACING ●
- (F) TPM, REFLECTIVE PAINT, 4" YELLOW
- (G) TPM, REMOVABLE TAPE, 4" YELLOW
- (K) TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE
- (R) TPM PAVEMENT MARKING WORDS REMOVABLE TAPE
- (X) TPM, REFLECTIVE PAINT, 24" WHITE
- (Y) TPM, REMOVABLE TAPE, 24" WHITE
- (M) MATCH TO EXISTING

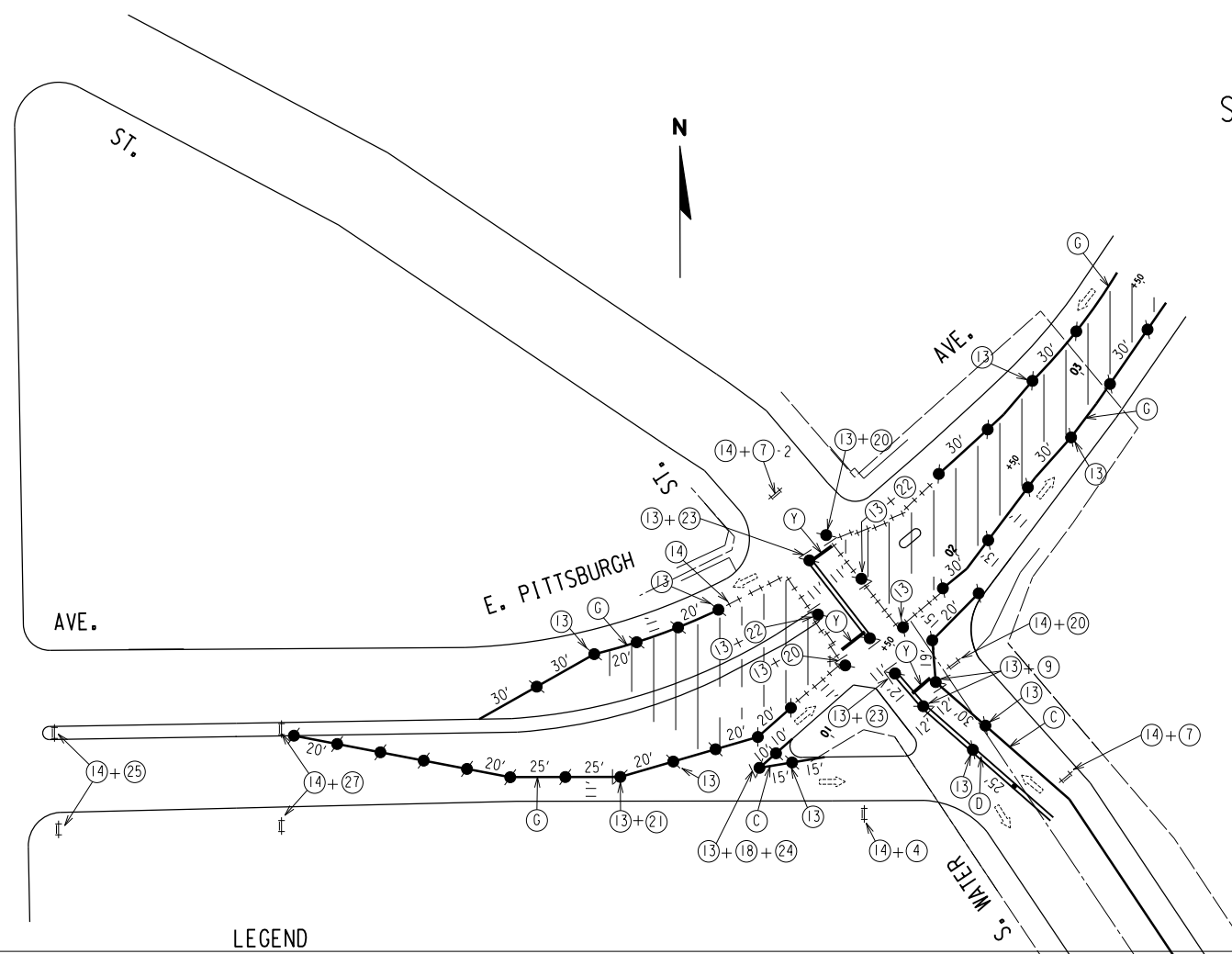
SHEET 21 OF 26

STAGE II - A

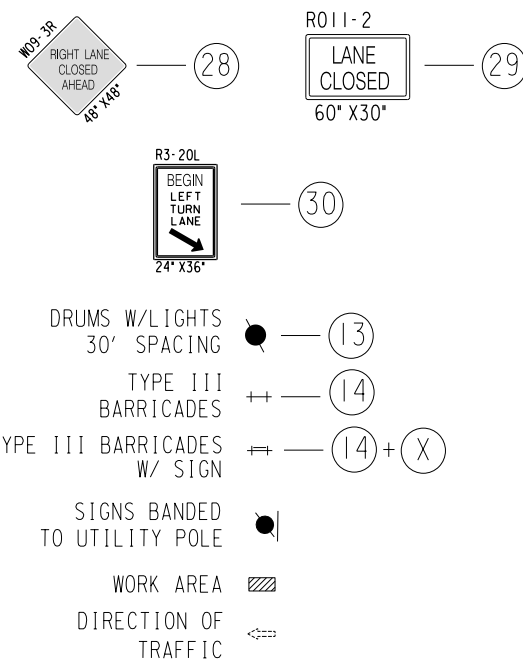


LEGEND

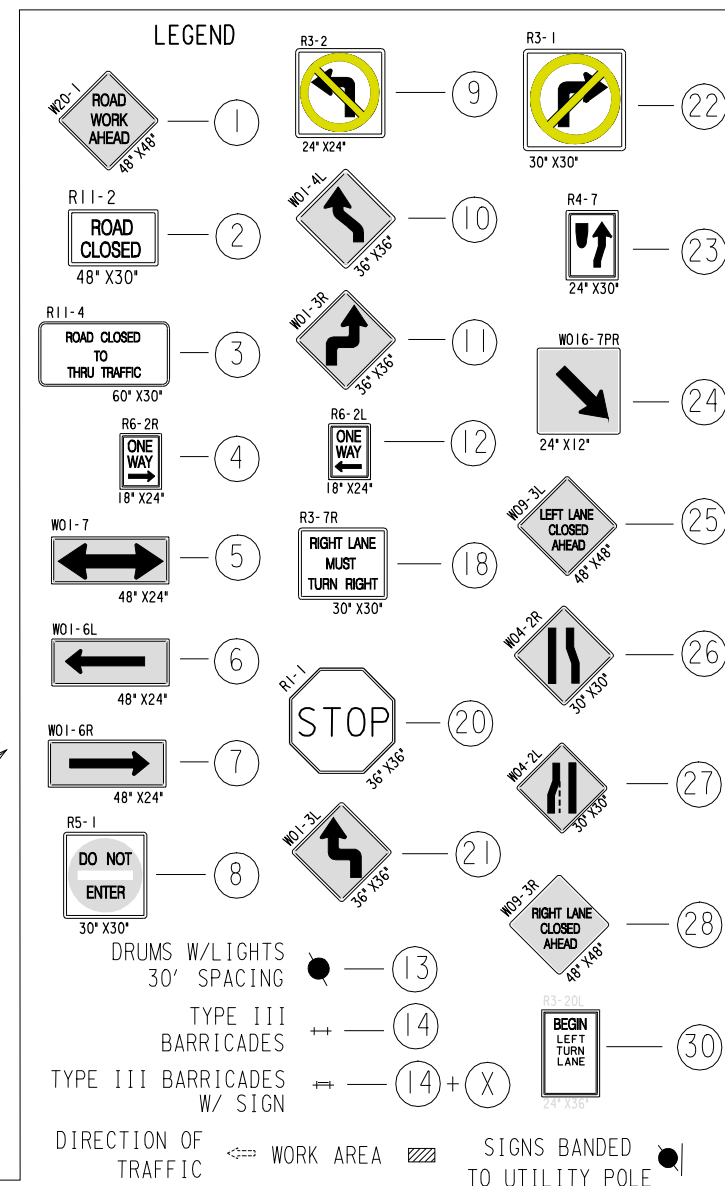
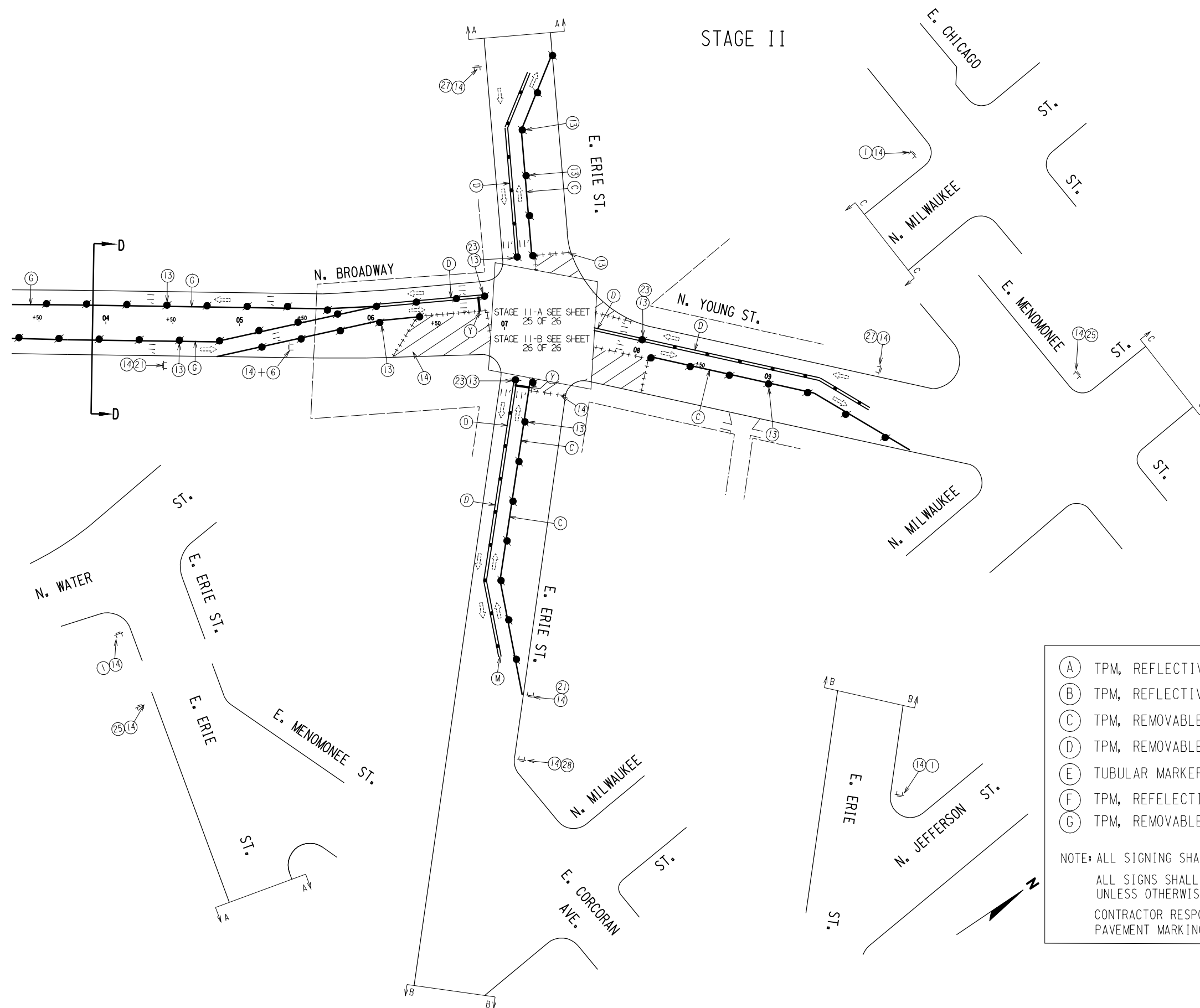




LEGEND



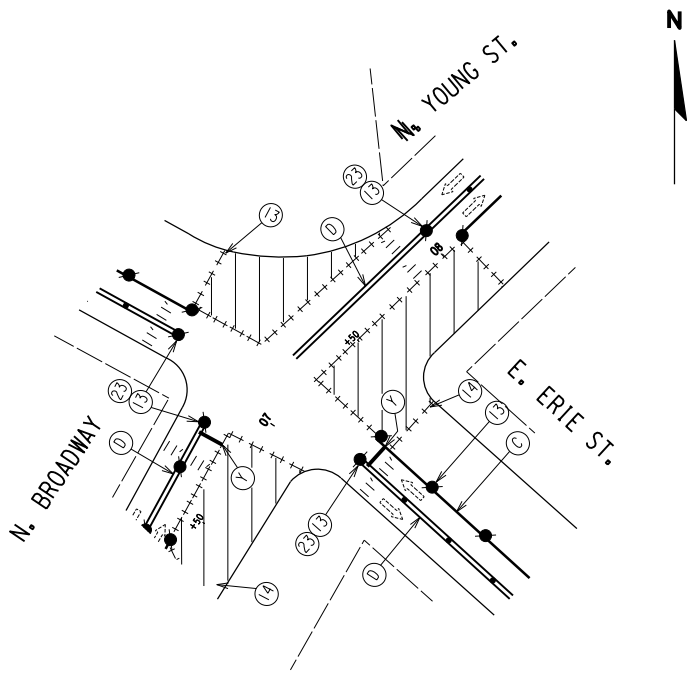
- SHEET 23 OF 26



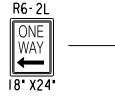
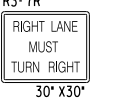
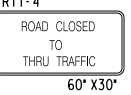
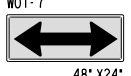
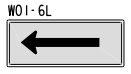
- | | |
|---|--|
| (A) TPM, REFLECTIVE PAINT, 4" WHITE | (K) TPM PAVEMENT MARKING
ARROWS TYPE II
REMOVABLE TAPE |
| (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW | (M) MATCH TO EXISTING |
| (C) TPM, REMOVABLE TAPE, 4" WHITE | (R) TPM PAVEMENT MARKING
WORDS REMOVABLE TAPE |
| (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW | (X) TPM, REFLECTIVE PAINT,
24" WHITE |
| (E) TUBULAR MARKERS 25' SPACING | (Y) TPM, REMOVABLE TAPE,
24" WHITE |
| (F) TPM, REFLECTIVE PAINT, 4" YELLOW | |
| (G) TPM, REMOVABLE TAPE, 4" YELLOW | |

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES
UNLESS OTHERWISE NOTED.
CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING
PAVEMENT MARKINGS.

STAGE II- A



LEGEND

 1	 7	 12	 23	 28	 29
 2	 8	 18	 24	 30	
 3	 9	 20	 25	 13	
 4	 10	 21	 26	 14	
 5	 11	 22	 27	 14 + X	
 6				 14	
				 14 + X	
				 14 + X	

(A) TPM, REFLECTIVE PAINT, 4" WHITE

(B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW

(C) TPM, REMOVABLE TAPE, 4" WHITE

(D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW

(E) TUBULAR MARKERS 25' SPACING

(F) TPM, REFLECTIVE PAINT, 4" YELLOW

(G) TPM, REMOVABLE TAPE, 4" YELLOW

(K) TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE

(R) TPM PAVEMENT MARKING WORDS REMOVABLE TAPE

(X) TPM, REFLECTIVE PAINT, 24" WHITE

(Y) TPM, REMOVABLE TAPE, 24" WHITE

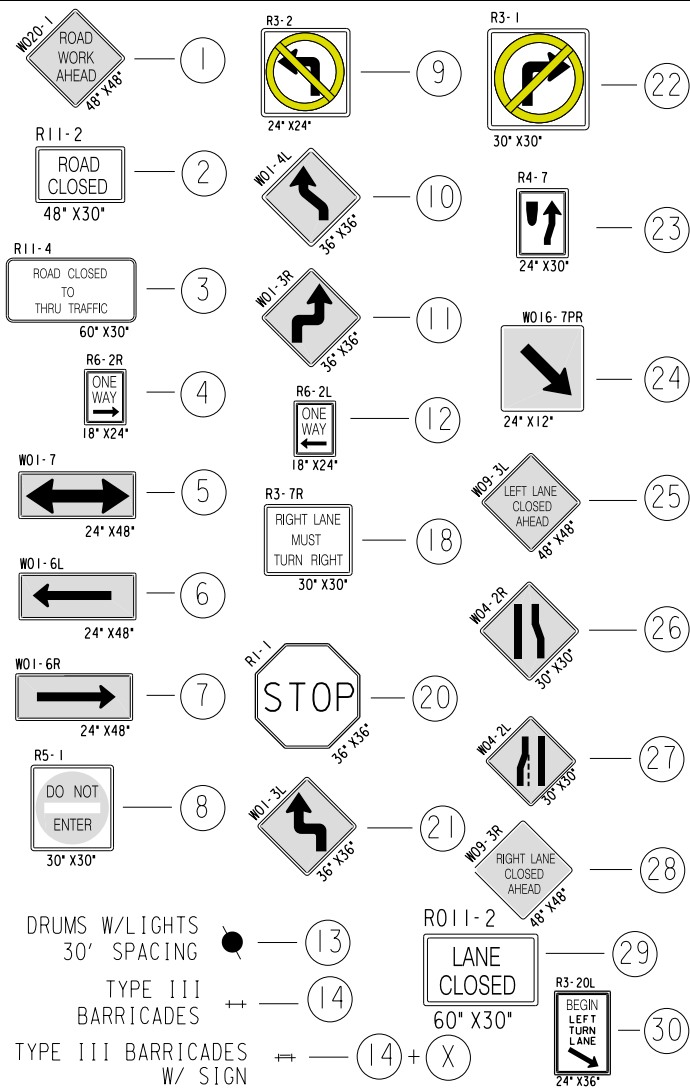
(M) MATCH TO EXISTING

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CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

LEGEND

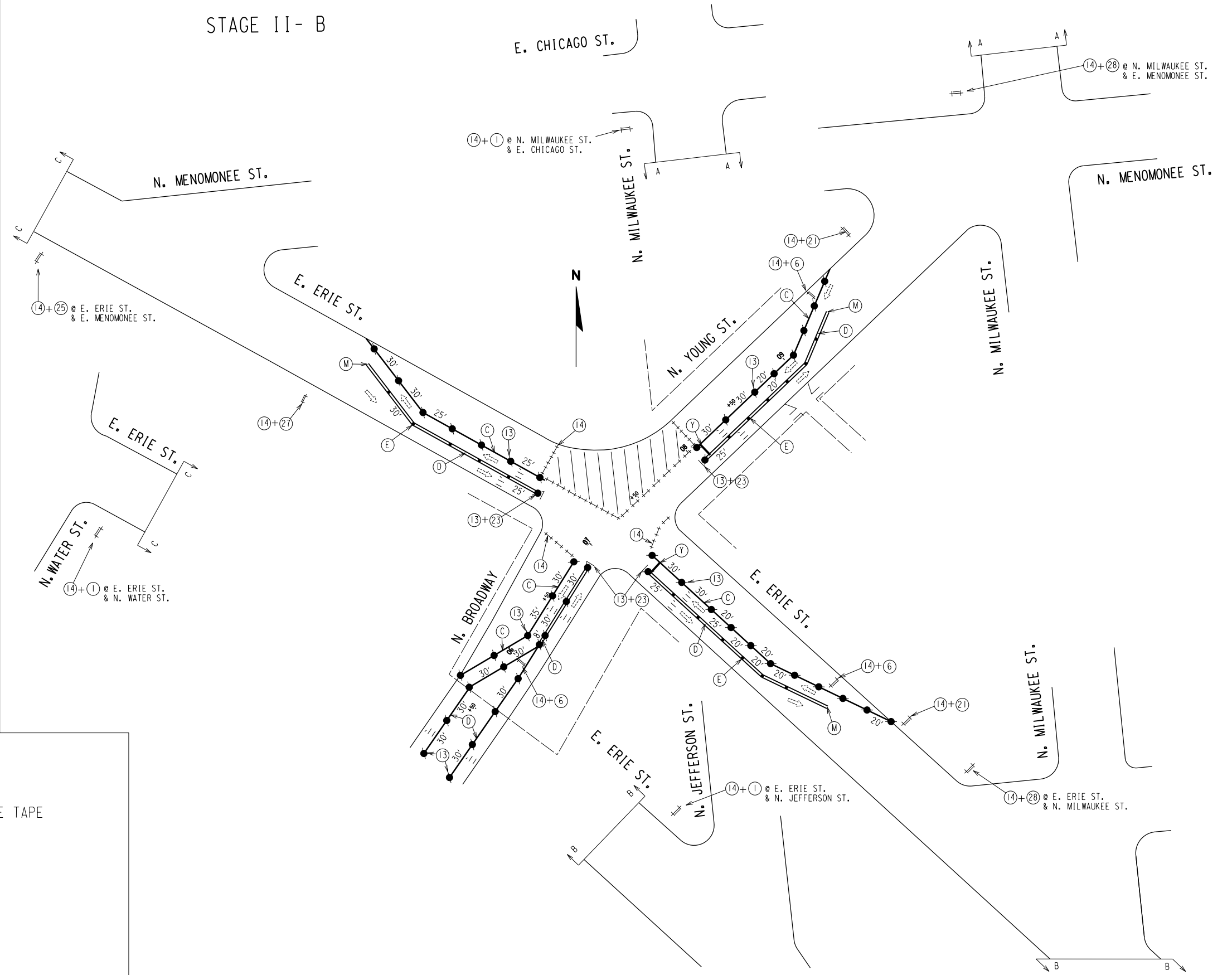


- DIRECTION OF TRAFFIC
- (A) TPM, REFLECTIVE PAINT, 4" WHITE
- (B) TPM, REFLECTIVE PAINT, 4" DOUBLE YELLOW
- (C) TPM, REMOVABLE TAPE, 4" WHITE
- (D) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW
- (E) TUBULAR MARKERS 25' SPACING
- (F) TPM, REFLECTIVE PAINT, 4" YELLOW
- (G) TPM, REMOVABLE TAPE, 4" YELLOW
- (K) TPM PAVEMENT MARKING ARROWS TYPE II REMOVABLE TAPE
- (R) TPM PAVEMENT MARKING WORDS REMOVABLE TAPE
- (X) TPM, REFLECTIVE PAINT, 24" WHITE
- (Y) TPM, REMOVABLE TAPE, 24" WHITE
- (M) MATCH TO EXISTING

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.
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UNLESS OTHERWISE NOTED.

CONTRACTOR RESPONSIBLE FOR COVERING ALL CONFLICTING PAVEMENT MARKINGS.

STAGE II- B



SHEET 26 OF 26

STATE PROJECT NUMBER: 1302-00-71, 73

HWY. STH 32 & LOCAL

COUNTY: MILWAUKEE

TRAFFIC CONTROL

SCALE FEET 0' 80'

SHEET NO:

E

DATE 17FEB14		E S T I M A T E O F Q U A N T I T I E S				
LINE					1302-00-71	1302-00-73
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY	QUANTITY
0010	204.0100	REMOVING PAVEMENT	SY	10,030.000	3,110.000	6,920.000
0020	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	SY	2,290.000	150.000	2,140.000
0030	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	1,360.000		1,360.000
0040	204.0150	REMOVING CURB & GUTTER	LF	490.000		490.000
0050	204.0155	REMOVING CONCRETE SIDEWALK	SY	1,450.000	960.000	490.000
0060	204.0200	REMOVING RAILROAD TRACK	LF	450.000	450.000	
0070	204.0220	REMOVING INLETS	EACH	11.000		11.000
0080	204.0255	ABANDONING CATCH BASINS	EACH	3.000		3.000
0090	204.0260	ABANDONING INLETS	EACH	1.000		1.000
0100	205.0100	EXCAVATION COMMON **P**	CY	8,730.000		8,730.000
0110	213.0100	FINISHING ROADWAY (PROJECT) 01. 1302-00-71	EACH	1.000	1.000	
0120	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	190.000	190.000	
0130	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	3,390.000	650.000	2,740.000
0140	320.0125	CONCRETE BASE 6-INCH	SY	140.000	120.000	20.000
0150	320.0145	CONCRETE BASE 8-INCH	SY	10.000		10.000
0160	415.0080	CONCRETE PAVEMENT 8-INCH	SY	8,570.000		8,570.000
0170	415.0090	CONCRETE PAVEMENT 9-INCH	SY	80.000	40.000	40.000
0180	416.0170	CONCRETE DRIVEWAY 7-INCH	SY	130.000	130.000	
0190	416.0180	CONCRETE DRIVEWAY 8-INCH	SY	70.000	70.000	
0200	416.0270	CONCRETE DRIVEWAY HES 7-INCH	SY	130.000	130.000	
0210	416.0280	CONCRETE DRIVEWAY HES 8-INCH	SY	290.000	290.000	
0220	416.0610	DRILLED TIE BARS	EACH	750.000	710.000	40.000
0230	455.0605	TACK COAT	GAL	520.000	10.000	510.000
0240	460.1101	HMA PAVEMENT TYPE E-1	TON	1,510.000		1,510.000
0250	465.0105	ASPHALTIC SURFACE	TON	160.000	160.000	
0260	601.0150	CONCRETE CURB INTEGRAL TYPE D	LF	120.000		120.000
0270	601.0322	CONCRETE CURB & GUTTER 22-INCH	LF	40.000		40.000
0280	601.0331	CONCRETE CURB & GUTTER 31-INCH	LF	3,290.000	40.000	3,250.000
0290	602.0410	CONCRETE SIDEWALK 5-INCH	SF	14,350.000	10,350.000	4,000.000
0300	602.0505	CURB RAMP DETECTABLE WARNING FIELD YELLOW	SF	200.000	110.000	90.000
0310	602.1000	CONCRETE LOADING ZONE	SF	30.000		30.000
0320	608.0512	STORM SEWER PIPE REINFORCED CONCRETE CLASS V 12-INCH	LF	6.000		6.000
0330	611.0420	RECONSTRUCTING MANHOLES	EACH	5.000		5.000
0340	611.0652	INLET COVERS TYPE T	EACH	6.000		6.000
0350	611.2004	MANHOLES 4-FT DIAMETER	EACH	3.000		3.000
0360	611.9705	SALVAGED MANHOLE COVERS	EACH	10.000		10.000
0370	611.9710	SALVAGED INLET COVERS	EACH	2.000		2.000
0380	619.1000	MOBILIZATION	EACH	1.000		1.000
0390	623.0200	DUST CONTROL SURFACE TREATMENT	SY	8,630.000	2,230.000	6,400.000
0400	625.0100	TOPSOIL	SY	1,130.000	830.000	300.000
0410	631.1000	SOD LAWN	SY	1,130.000	830.000	300.000
0420	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000	
0430	643.0100	TRAFFIC CONTROL (PROJECT) 02. 1302-00-73	EACH	1.000		1.000
0440	643.0300	TRAFFIC CONTROL DRUMS	DAY	24,541.000		24,541.000
0450	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	15,236.000		15,236.000
0460	643.0500	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	EACH	254.000		254.000
0470	643.0600	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	EACH	254.000		254.000
0480	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	30,472.000		30,472.000
0490	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	24,541.000		24,541.000
0500	643.0900	TRAFFIC CONTROL SIGNS	DAY	8,794.000		8,794.000

DATE 17FEB14		E S T I M A T E O F Q U A N T I T I E S				
LINE					1302-00-71	1302-00-73
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY	QUANTITY
0510	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	7,860.000	7,860.000	
0520	646.0116	PAVEMENT MARKING EPOXY 6-INCH	LF	5,390.000	5,390.000	
0530	646.0600	REMOVING PAVEMENT MARKINGS	LF	500.000	500.000	
0540	647.0206	PAVEMENT MARKING ARROWS BIKE LANE EPOXY	EACH	32.000	32.000	
0550	647.0306	PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY	EACH	32.000	32.000	
0560	647.0336	PAVEMENT MARKING SYMBOLS BIKE SHARED LANE EPOXY	EACH	16.000	16.000	
0570	647.0776	PAVEMENT MARKING CROSSWALK EPOXY 12-INCH	LF	705.000	705.000	
0580	649.0200	TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH	LF	1,420.000		1,420.000
0590	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	26,060.000		26,060.000
0600	649.1400	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 24-INCH	LF	208.000		208.000
0610	649.1800	TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE	EACH	2.000		2.000
0620	649.2000	TEMPORARY PAVEMENT MARKING WORDS REMOVABLE TAPE	EACH	2.000		2.000
0630	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	27.000		27.000
0640	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	1,900.000	280.000	1,620.000
0650	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	3,450.000		3,450.000
0660	650.7000	CONSTRUCTION STAKING CONCRETE PAVEMENT	LF	1,280.000	280.000	1,000.000
0670	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1302-00-71	LS	1.000	1.000	
0680	690.0150	SAWING ASPHALT	LF	300.000	190.000	110.000
0690	690.0250	SAWING CONCRETE	LF	4,370.000	4,260.000	110.000
0700	715.0415	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	8,570.000	8,570.000	
0710	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT \$5.00/HR	HRS	600.000		600.000
0720	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT \$5.00/HR	HRS	650.000		650.000
0730	SPV.0045	SPECIAL 01. TEMPORARY CROSSWALK	DAY	60.000		60.000
0740	SPV.0060	SPECIAL 01. INLET COVERS TYPE 57	EACH	14.000		14.000
0750	SPV.0060	SPECIAL 02. MANHOLE COVERS TYPE 58A	EACH	20.000		20.000
0760	SPV.0060	SPECIAL 03. CATCH BASIN TYPE 44A	EACH	7.000		7.000
0770	SPV.0060	SPECIAL 04. CATCH BASIN TYPE 45A	EACH	11.000		11.000
0780	SPV.0060	SPECIAL 05. ADJUSTING TES MANHOLE COVERS	EACH	7.000		7.000
0790	SPV.0060	SPECIAL 06. INLET SCREEN TYPE M	EACH	37.000		37.000
0800	SPV.0060	SPECIAL 07. INLET SCREEN TYPE R	EACH	28.000		28.000
0810	SPV.0060	SPECIAL 08. ADJUSTING WATER BOXES	EACH	32.000		32.000
0820	SPV.0060	SPECIAL 09. INLETS COVERS TYPE 55	EACH	1.000		1.000
0830	SPV.0085	SPECIAL 01. BALANCING BLOCK STEEL (STRUCTURE B-40-0591)	LB	16,214.000	16,214.000	
0840	SPV.0085	SPECIAL 02. BALANCING BLOCK STEEL (STRUCTURE B-40-0952)	LB	10,828.000	10,828.000	
0850	SPV.0090	SPECIAL 01. CONSTRUCTION STAKING CONCRETE SIDEWALK	LF	1,290.000	1,220.000	70.000
0860	SPV.0090	SPECIAL 02. CONSTRUCTION STAKING ASPHALT PAVEMENT	LF	1,680.000		1,680.000
0870	SPV.0090	SPECIAL 03. STORM SEWER PIPE CORRUGATED PVC 8-INCH	LF	352.000		352.000
0880	SPV.0105	SPECIAL 01. COUNTERWEIGHT BALANCING CALCULATIONS (STRUCTURE B-40-0591)	LS	1.000	1.000	
0890	SPV.0105	SPECIAL 02. COUNTERWEIGHT BALANCING CALCULATIONS (STRUCTURE B-40-0952)	LS	1.000	1.000	

DATE 17FEB14			E S T I M A T E O F Q U A N T I T I E S			
LINE					1302-00-71	1302-00-73
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY	QUANTITY
0900	SPV.0105	SPECIAL 03. REDISTRIBUTION OF EXISTING BALANCING BLOCKS (STRUCTURE B-40-0591)	LS	1.000	1.000	
0910	SPV.0165	SPECIAL 01. METAL PLATES FOR BIKE LANES (STRUCTURE B-40-0591)	SF	676.000	676.000	
0920	SPV.0165	SPECIAL 02. METAL PLATES FOR BIKE LANES (STRUCTURE B-40-0952)	SF	677.000	677.000	
0930	SPV.0180	SPECIAL 01. JOINT SEALING	SY	6,600.000		6,600.000

Removals							
Category	Location	0020 - Participating					
Item Number		204.0100	204.0120	204.0115	204.0150	204.0155	204.0200
Description		Removing Pavement	Removing Asphalt Surface Milling	Removing Asphaltic Butt Joints	Removing Curb and Gutter	Removing Concrete Sidewalk	Removing RR Tracks
Unit Pay		SY	SY	SY	LF	SY	LF
Station to Station	South Water Street						
	Sta. 0+25 to Sta. 3+00	LT	360	160	380	60	100
	Sta. 3+00 to Sta. 9+00	LT	1,100	180		40	110
	Sta. 9+00 to Sta. 15+00	LT	1,020	30		40	90
	Sta. 15+00 to Sta. 21+00	LT	830			60	
	Sta. 21+00 to Sta. 27+00	LT	260				
	Sta. 27+00 to Sta. 32+00	LT	970			70	
	Sta. 0+25 to Sta. 3+00	RT	240	170	340	20	150
	Sta. 3+00 to Sta. 9+00	RT	1,480	180		490	100
	Sta. 9+00 to Sta. 15+00	RT	1,090	30		320	90
	Sta. 15+00 to Sta. 21+00	RT	950			20	60
	Sta. 21+00 to Sta. 27+00	RT	550				
	Sta. 27+00 to Sta. 32+00	RT	930				
	East Pittsburgh Avenue and North Broadway						
	Sta. 1+00 to Sta. 5+00	LT	70		860	60	20
	Sta. 5+00 to Sta. 8+50	LT	40	380	70	20	
	Sta. 1+00 to Sta. 5+00	RT	140		420	60	30
	Sta. 5+00 to Sta. 8+50	RT		230	70	210	120
Total			10,030	1,360	2,140	490	1,420
						1,420	450

Pavement Base					
Category	Location	0020 - Participating			
Item Number		305.0110	305.0120	320.0125	320.0145
Description		Base Aggregate 3/4-inch	Base Aggregate 1-1/4 inch	Concrete Base 6-inch	Concrete Base 8-inch
Unit Pay		Ton	Ton	SY	SY
Station to Station	South Water Street				
	Sta. 0+25 to Sta. 3+00	LT		120	10
	Sta. 3+00 to Sta. 9+00	LT		440	
	Sta. 9+00 to Sta. 15+00	LT		330	
	Sta. 15+00 to Sta. 21+00	LT		190	
	Sta. 27+00 to Sta. 32+00	LT		280	
	Sta. 0+25 to Sta. 3+00	RT	40	90	
	Sta. 3+00 to Sta. 9+00	RT	90	350	80
	Sta. 9+00 to Sta. 15+00	RT	60	330	40
	Sta. 15+00 to Sta. 21+00	RT		270	20
	Sta. 21+00 to Sta. 27+00	RT		180	
	Sta. 27+00 to Sta. 32+00	RT		270	
	East Pittsburgh Avenue and North Broadway				
	Sta. 1+00 to Sta. 5+00	LT		50	
	Sta. 5+00 to Sta. 8+50	LT		200	
	Sta. 1+00 to Sta. 5+00	RT		10	
	Sta. 5+00 to Sta. 8+50	RT		190	
Total			190	3,390	140
					10

Pavement Specials				
Category	Location	0020-Participating		0020 -Non Participating
Item Number		SPV.0090.01	SPV.0090.02	SPV.0180.01
Description		Const. Staking Conc. Sidewalk	Const. Staking Asphalt	Joint Sealing
Unit Pay		LF	LF	SY
Station to Station	Project I.D. 1302-00-71			
	Sta. 0+25 to Sta. 32+00	LT	100	
	Sta. 0+25 to Sta. 32+00	RT	1,120	
	Sta. 1+00 to Sta. 8+50	LT		
	Sta. 1+00 to Sta. 8+50	RT		
	Project I.D. 1302-00-71 Total		1,220	-
	Project I.D. 1302-00-73			
	Sta. 0+25 to Sta. 32+00	LT	70	850
	Sta. 0+25 to Sta. 32+00	RT		530
	Sta. 1+00 to Sta. 8+50	LT		300
	Sta. 1+00 to Sta. 8+50	RT		
	Project I.D. 1302-00-73 Total		70	1,680
Contract Total			1,290	1,680

Pavement											
Category	Location	0020 - Participating									
Item Number		415.0080	415.0090	416.0170	416.0180	416.0270	416.0280	416.0610	455.0605	460.1101	465.0105
Description		Concrete Pavement 8-inch	Concrete Pavement 9-inch	Concrete Driveway 7-inch	Concrete Driveway 8-inch	HES Conc. Driveway 7-inch	HES Conc. Driveway 8-inch	Drilled Tie Bars	Tack Coat	HMA Pav't Type E-1	Asphaltic Surface
Unit Pay		SY	SY	SY	SY	SY	SY	Each	Gal	Ton	Ton
Station to Station	Project I.D. 1302-00-71										
	Sta. 0+25 to Sta. 32+00	LT			30	50		355	10		
	Sta. 0+25 to Sta. 32+00	RT			100	80	290	355			160
	Sta. 1+00 to Sta. 8+50	LT		40							
	Sta. 1+00 to Sta. 8+50	RT			70						
	Project I.D. 1302-00-71 Total		-	40	130	70	130	290	710	10	-
	Project I.D. 1302-00-73										
	Sta. 0+25 to Sta. 32+00	LT	3,670					20	220	640	
	Sta. 0+25 to Sta. 32+00	RT	3,800					20	220	640	
	Sta. 1+00 to Sta. 8+50	LT	650						40	140	
	Sta. 1+00 to Sta. 8+50	RT	450	40					30	90	
	Project I.D. 1302-00-73 Total		8,570	40	-	-	-	40	510	1,510	-
Contract Total			8,570	80	130	70	130	290	750	520	160

Other Proposed Work																		
Category	Location	0020-Participating																
Item Number		601.0150	601.0322	601.0331	602.0410	602.0505	602.1000	623.0200	625.0100	631.1000	650.4000	650.4500	650.5500	650.7000	650.9910	690.0150	690.0250	
Description		Concrete Curb Integral Type D	Concrete Curb and Gutter 22-inch	Concrete Curb and Gutter 31-inch	Concrete Sidewalk 5-inch	Curb Ramp Detectable Warning Field	Concrete Loading Zone	Dust Control Treatment	Top soil	Sod Lawn	Const. Staking Storm Sewer	Const. Staking Subgrade	Const. Staking Curb and Gutter	Const. Staking Conc. Pavement	Const. Staking Supp. Control	Sawing Asphalt	Sawing Concrete	
Unit Pay		LF	LF	LF	SF	SF	SF	SY	SY	SY	Each	LF	LF	LF	LF	Lump Sum	LF	LF
STATION to STATION	South Water Street																	
	Sta. 0+25 to Sta. 3+00	LT			290	1,030	20		280	40	40	1	100	290				
	Sta. 3+00 to Sta. 9+00	LT			490				870	20	20	2	300	490	335			
	Sta. 9+00 to Sta. 15+00	LT			340	380	20		930			1	200	340	265			300
	Sta. 15+00 to Sta. 21+00	LT			170	230			830	60	60	1	130	170	335			690
	Sta. 21+00 to Sta. 27+00	LT																1,220
	Sta. 27+00 to Sta. 32+00	LT			180	750	20		780	60	60	2	100	180	205			440
	Sta. 0+25 to Sta. 3+00	RT			210	1,990	10		180	170	170	1	100	210				
	Sta. 3+00 to Sta. 9+00	RT			580	4,980			1,090	490	490	2	300	580			80	
	Sta. 9+00 to Sta. 15+00	RT			440	3,390	10		950	210	210	4	200	440			100	250
	Sta. 15+00 to Sta. 21+00	RT			130				950	30	30	2	150	130			10	560
	Sta. 21+00 to Sta. 27+00	RT			40									40				680
	Sta. 27+00 to Sta. 32+00	RT			230				750	30	30	2	100	230				220
	East Pittsburgh Avenue and North Broadway																	
	Sta. 1+00 to Sta. 5+00	LT	60			200		30				2		60				
Sta. 5+00 to Sta. 8+50	LT			20				610			2	130	20	140		50		
Sta. 1+00 to Sta. 5+00	RT		30	30	260	10					2		60				10	
Sta. 5+00 to Sta. 8+50	RT	60	10	140	1,140	20		410	20	20	3	90	210			60		
Total			120	40	3,290	14,350	110	30	8,630	1,130	1,130	27	1,900	3,450	1,280	1	300	4,370

PROJECT/BRIDGE SPECIALS			
Project I.D.	1302-00-71	1302-00-73	1302-00-71
Category	0010-Participating	0010-Participating	0010-Participating
Item Number	213.0100	619.1000	642.5001
Description	Finishing Roadway (Project)	Mobilization	Field Office Type B
Unit Pay	LS	LS	Each
Location	Quantities		
Throughout Project Limits	1	1	1
Contract Total	1	1	1

Water Facilities	
Project ID	1302-00-73
Category	0020-Non Participating
Item Number	SPV.0060.08
Description	Adjust Water Box
Unit Pay	Each
Location	Quantities
Throughout Project Limits	32
Contract Total	32

Erosion Control		
Project ID	1302-00-73	1302-00-73
Category	0010-Participating	0010-Participating
Item Number	SPV.0060.06	SPV.0060.07
Description	Inlet Basket Type M	Inlet Screen Type R
Unit Pay	Each	Each
Location	Quantities	
Throughout Project Limits	37	28
Total	37	28

SALVAGED MANHOLE COVERS				
GROUP CODE	No	Location		PROPOSED ELEVATION
		STATION	OFFSET	
South Water Street				
0020	211	19+35.5	0.4' RT	6.15
0020	217	31+41.0	0.1' RT	6.25
East Pittsburgh Avenue				
0020	221	01+40.1	16.0' RT	10.93
0020	222	01+49.0	19.5' RT	10.88
0020	223	01+84.0	24.8' LT	11.63
North Broadway				
0020	225	06+77.0	6.4' LT	11.47
0020	226	06+80.0	15.0' RT	11.01
0020	227	07+28.8	19.4' RT	10.35
0020	228	07+29.2	28.9' RT	10.20
0020	229	07+42.5	48.8' LT	10.92

10 SALVAGED MANHOLE COVERS (611.9705) (0020 - Participating)

SALVAGED INLET COVERS				
GROUP CODE	No	Location		PROPOSED ELEVATION
		STATION	OFFSET	
South Water Street				
0020	116	16+56.0	25.0' RT	6.26
0020	117	19+37.0	25.0' LT	5.10

2 SALVAGED INLET COVERS (611.9710) (0020 - Participating)

ABANDONING DRAINAGE STRUCTURES				
GROUP CODE	NO.	LOCATION		REMARKS
		STATION	OFFSET	
South Water Street				
0020	108	06+15.5	22.5' RT	Abandon INLET
0020	113	11+11.0	24.0' LT	Abandon CB
0020	114	11+41.5	22.5' RT	Abandon CB
0020	115	11+86.0	22.5' RT	Abandon CB

3 ABANDONING CATCH BASINS (204.0255) (0020 - Participating)

1 ABANDONING INLETS (204.0260) (0020 - Participating)

PLACING NEW INLET COVERS				
STRUCTURES				
Category Code	NO.	LOCATION		COVER ELEV.
		STATION	OFFSET	
South Water Street				
0020	101	00+97.0	57.0' LT	5.10
East Pittsburgh Avenue				
0020	119	01+96.6	20.0' RT	11.52
North Broadway				
0020	121	06+80.0	20.0' RT	10.78

* NO REPAIR WORK NEEDED

3 INLET COVERS TYPE 57 (SPV.0060.01) (0020 - PARTICIPATING)

Remove Drainage Structures			
DRAINAGE STRUCTURES			
GROUP CODE	NO.	LOCATION	
		STATION	OFFSET
0020	100	00+53.0	52.0' LT
0020	102	01+20.5	22.0' LT
0020	103	03+24.0	22.0' LT
0020	104	03+25.0	22.0' RT
0020	105	04+02.0	22.0' LT
0020	106	04+85.0	22.0' RT
0020	107	06+14.0	22.0' LT
0020	109	08+24.0	22.0' LT
0020	110	08+79.0	22.0' RT
0020	111	09+25.0	22.0' LT
0020	112	10+28.3	22.5' RT

11 REMOVING INLETS (204.0220) (0020-PARTICIPATING)

PLACING NEW MANHOLE COVERS					
STRUCTURES					REMARKS
Category Code	NO.	LOCATION		COVER ELEV.	
		STATION	OFFSET		
South Water Street					
0020	200	00+67.0	24.0' LT	5.23	No Repair Work Needed
0020	200A	00+76.5	17.5' RT	5.48	No Repair Work Needed
0020	201	03+27.8	17.2' LT	3.85	No Repair Work Needed
0020	202	03+88.0	13.5' LT	4.05	No Repair Work Needed
0020	203	05+30.5	26.0' RT	3.29	No Repair Work Needed
0020	204	06+49.9	1.9' RT	3.48	No Repair Work Needed
0020	205	09+82.9	2.7' RT	4.60	Repair 1 Manhole Step
0020	206	10+41.6	2.8' RT	4.48	Repair 18" of Brickwork (Reconstruct MH)
0020	207	11+53.9	2.7' LT	4.81	Repair 18" of Brickwork (Reconstruct MH)
0020	208	12+64.0	1.7' RT	6.30	Repair 18" of Brickwork (Reconstruct MH)
0020	208A	13+36.3	0.1' RT	6.97	Repair 15" of Brickwork (Reconstruct MH)
0020	209	17+04.5	0.4' RT	6.57	Repair 9" of Brickwork
0020	210	18+21.0	0.3' LT	6.45	Repair 9" of Brickwork
0020	213	29+25.0	0.3' LT	5.80	Repair 15" of Brickwork (Reconstruct MH)
0020	215	30+63.5	0.4' RT	7.55	No Repair Work Needed
0020	216	31+17.0	16.7' LT	6.56	No Repair Work Needed
East Pittsburgh Avenue					
0020	224	02+02.8	20.5' LT	11.94	No Repair Work Needed

17 MANHOLE COVERS TYPE 58A (SPV.0060.02) (0020 - PARTICIPATING)

5 RECONSTRUCTING MANHOLES (611.0420) (0020 - PARTICIPATING)

ADJUSTING TES MANHOLE COVERS						
CATEGORY CODE	NO.	LOCATION		PROP.	COVER TYPE	REMARKS
		STATION	OFFSET	ELEV.		
South Water Street						
0030	301	00+80.0	30.5' RT	5.51	6A	
0030	303	18+85.6	23.2' LT	5.58	6A	
0030	305	29+81.5	14.2' RT	6.42	6A	
0030	306	31+01.5	17.0' RT	6.78	6A	
East Pittsburgh Avenue						
0030	307	01+68.9	11.3' LT	11.13	6A	
0030	308	01+87.0	8.3' RT	11.76	6A	
North Broadway						
0030	309	07+45.0	16.3' LT	10.77	6A	

7 ADJUSTING TES MANHOLE COVERS (SPV.0060.05) (0030- Non-PARTICIPATING)

New Structures													
STRUCTURES								PVC PIPE, STORM SEWER					
GROUP CODE	No.	LOCATION		COVER ELEV.	STRUCT.	FRAME & LID	IE DEPTH	CONNECTION STRUCTURE		SIZE (IN)	LENGTH (FT)	INVERT ELEV.	
		STATION	OFFSET					FROM	TO			INLET	OUTLET
0020	1A	00+54	52.0' LT	5.00	44A	57	8.25	1A	Existing Drain	8	3	0.75	Existing Drain
0020	1	01+20	20.0' LT	4.80	44A	57	8.25	1	Existing Drain	8	3	0.55	Existing Drain
0020	2A	03+25	22.5' RT	4.12	4' Dia. MH	58A	6.25	2A	Existing Drain	8	3	1.00	-
0020	2	03+16	20.0' RT	3.60	45A	57	5.35	2	2A	8	9	0.45	0.35
0020	3	03+24	20.0' LT	3.60	45A	57	5.35	3	Existing Drain	8	3	0.45	0.40
0020	4	04+00	20.0' LT	3.75	45A	57	5.35	4	Existing Drain	8	3	0.60	Existing Drain
0020	4A	04+06	48.0' RT	2.65	45A	57	5.35	4A	5A	8	85	-0.36	-0.50
0020	5A	04+85	22.0' RT	3.30	4' Dia. MH	58A	6.25	5A	Existing Drain	8	3	0.20	-
0020	5	05+00	20.0' RT	2.59	45A	57	5.33	5	5A	8	14	-0.55	-0.65
0020	6	06+14	20.0' LT	3.50	45A	T	5.35	6	Existing Drain	8	3	0.15	Existing Drain
0020	7	06+25	20.0' RT	2.70	45A	55	5.33	7	204	8	30	-0.45	-0.65
0020	7A	06+75	20.0' LT	3.89	45A	T	5.33	7A	204	8	33	-0.40	-0.65
0020	8	08+25	20.0' LT	3.88	45A	T	5.33	8	Existing Drain	8	3	0.75	Existing Drain
0020	9	08+81	20.0' RT	3.63	45A	57	5.33	9	Existing Drain	8	3	0.50	Existing Drain
0020	10	09+25	20.0' LT	3.99	45A	T	5.33	10	Existing Drain	8	3	0.85	Existing Drain
0020	11	10+30	20.0' LT	4.25	44A	T	8.25	11	206	8	25	0.00	-0.15
0020	12	10+30	20.0' RT	3.82	44A	57	8.25	12	206	8	20	0.95	0.87
0020	13	11+17	20.0' LT	4.55	44A	T	8.85	13	207	8	40	0.30	0.10
0020	14	11+25	20.0' RT	3.76	44A	57	8.25	14	207	8	36	-0.50	-0.65
0020	15	29+58	24.0' RT	5.88	44A	57	9.00	15	16	8	30	0.50	0.25
0020	16	29+75	0	6.70	4' Dia. MH	58A	9.55	213	215	12	6	-0.85	-0.90

11 Inlet Cover Type 57 (SPV.0060.01) (0020 - Participating)
3 Manhole Cover Type 58A (SPV.0060.02) (0020 - Participating)
7 Catch Basin Type 44A (SPV.0060.03) (0020 - Participating)
11 Catch Basin Type 45A (SPV.0060.04) (0020 - Participating)
1 Inlet Cover Type 55 (SPV.0060.09) (0020 - Participating)
352 LF Storm Sewer Pipe Corrugated PVC 8" (SPV.0090.03) (0020 - Participating)
6 LF Storm Sewer Pipe Reinforced Concrete Class V (608.0512) (0020 - Participating)
3 Manholes 4-FT Diameter (611.2004) (0020 - Participating)
6 Inlet Cover Type T (611.0652) (0020 - Participating)

Estimate of Traffic Control Items Required (0010 Participating)							
Items		Stage 1 (Each) * (Days)		Stage 2 (Each) * (Days)		Project ID 1302- 00-73 Total	Contract Total
(1)643.0300	Traffic Control, Drums	245	12,985	214	11,556	24,541	24,541
(2)643.0420	Traffic Control, Barricades, Type III	100	5,300	184	9,936	15,236	15,236
643.0705	Traffic Control, Warning Lights, Type "A" (Flashing)	200	10,600	368	19,872	30,472	30,472
643.0715	Traffic Control, Warning Lights, Type "C" (Steady)	245	12,985	214	11,556	24,541	24,541
643.0900	Traffic Control, Signs	62	3,286	102	5,508	8,794	8,794
SPV.0045.01	Temporary Crosswalk	5	30	5	30	60	60
(3) Temporary Pavement Marking							
643.0500	Traffic Control, Flexible Tubular Marker Posts	128 Each		126 Each		254 Each	254 Each
643.0600	Traffic Control, Flexible Tubular Marker Bases	128 Each		126 Each		254 Each	254 Each
649.0200	Temporary Pavement Marking Reflective Paint 4"	1,420 L.F.		0 L.F.		1,420 L.F.	1,420 L.F.
649.0400	Temporary Pavement Marking Removable Tape 4"	10,595 L.F.		15,465 L.F.		26,060 L.F.	26,060 L.F.
649.1400	Temporary Pavement Marking Stop Line 24" Removeable Tape	33 L.F.		175 L.F.		208 L.F.	208 L.F.
649.1800	Temporary Pavement Marking Arrows Removable Tape	0		2		2	2
649.2000	Temporary Pavement Marking Words Removeable Tape	0		2		2	2
643.0100	Traffic Control (Project) [Lump Sum]					1	1
(1) All Drums have one steady burning yellow light (2) All Type III Barricades have 2 flashing yellow lights (3) When placing temporary pavement marking removable tape, the tape shall be sliced or cut across its width every 25 feet. This will limit ravelling.							
Total							

PAVEMENT MARKING QUANTITIES							
Category	0010 -Participating						
Item Number	646.0106	646.0116	647.0206	647.0306	647.0336	647.0776	647.0600
Description	Pavement Marking Epoxy 4-inch	Pavement Marking Epoxy 6-inch	Pavement Marking Arrows Bike Lane Epoxy	Pavement Marking Symbols Bike Lane Epoxy	Pavement Marking Symbols Shared Bike Lane Epoxy	Pavement Marking Crosswalk Epoxy 12-inch	Removing Pavement Markings
Unit Pay	LF	LF	Each	Each	Each	LF	LF
Station to Station	South Water Street						
	Sta. 0+25 to Sta. 11+70	230					
	Sta. 11+70 to Sta. 21+50	2,230	1,430	8	8		
	Sta. 21+50 to Sta. 32+90	2,320	1,930	12	12		
	Sta. 32+90 to Sta. 39+60	1,490	1,320	8	8		
	East Pittsburgh Avenue and North Broadway						
	Sta. 1+00 to Sta. 09+50	1,090			6	705	
	East Russell Avenue						
	Sta. 7+00 to Sta. 20+00				10		
	South Bay Street						
	Sta. 20+00 to Sta. 24+00	500	710	4	4		500
	Totals	7,860	5,390	32	32	16	705
							500

EARTHWORK SUMMARY

Station	Location	Excavation Common (1) Item #205.0100		Salvaged/ Unuseable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (6)	Mass Ordinate +/- (7)	Waste	Borrow
		Cut (2)	EBS Excavation (3)							
		CY	CY		CY	CY	CY	CY	CY	CY
0+25 to 32+00 and 1+00 to 8+50	S. Water St., E. Pittsburgh Ave., and North Broadway	8,732	-	3,550	5,182	280	336	830	8,396	-

- 1) Common Excavation is the cut quantity. Item number 205.0100. No EBS Excavation is expected, but test rolling provisions need to be followed.
- 2) Salvaged/Useable Pavement material is included in Cut.
- 3) EBS Excavation to be backfilled with select borrow material. Note: This is designers choice, can be backfilled with Borrow, or cut as well.
- 4) Salvaged/Useable Pavement Material
- 5) Available Material = Cut - Salvaged/Unuseable Pavement Material
- 6) Expanded Fill. Factor = 1.20.
- 7) The Mass ordinate (+ or -) quantity represents the difference in cut and fill quantities. (+) indicates excess material (waste) and (-) indicates a shortage (borrow).
- 8) To be bid as part of the base aggregate dense 1-1/4"

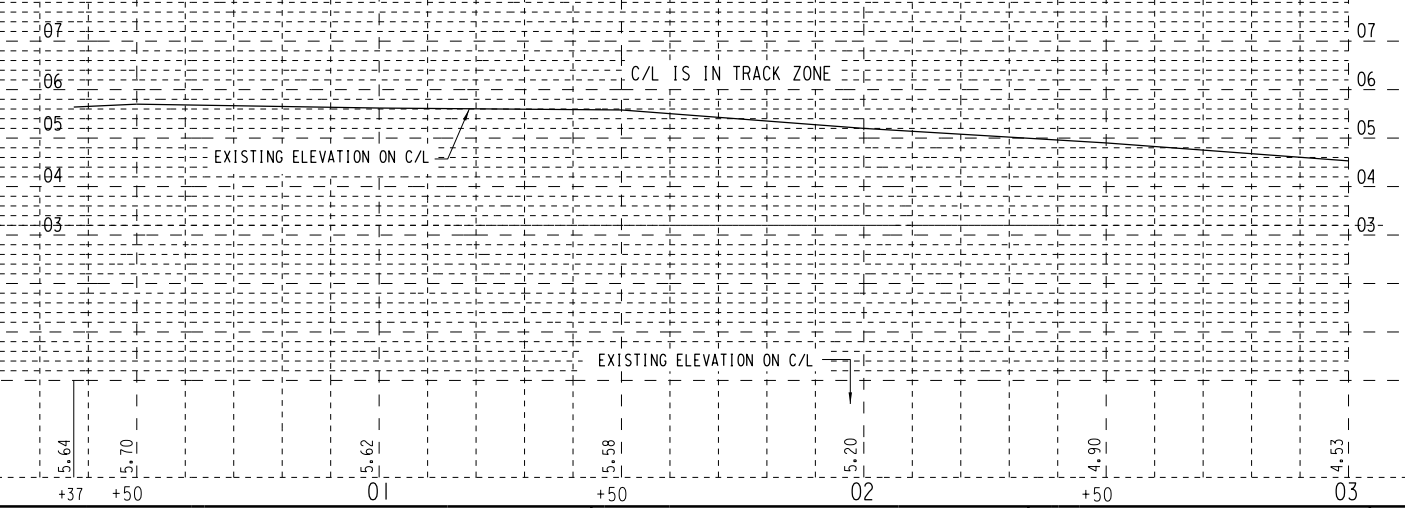
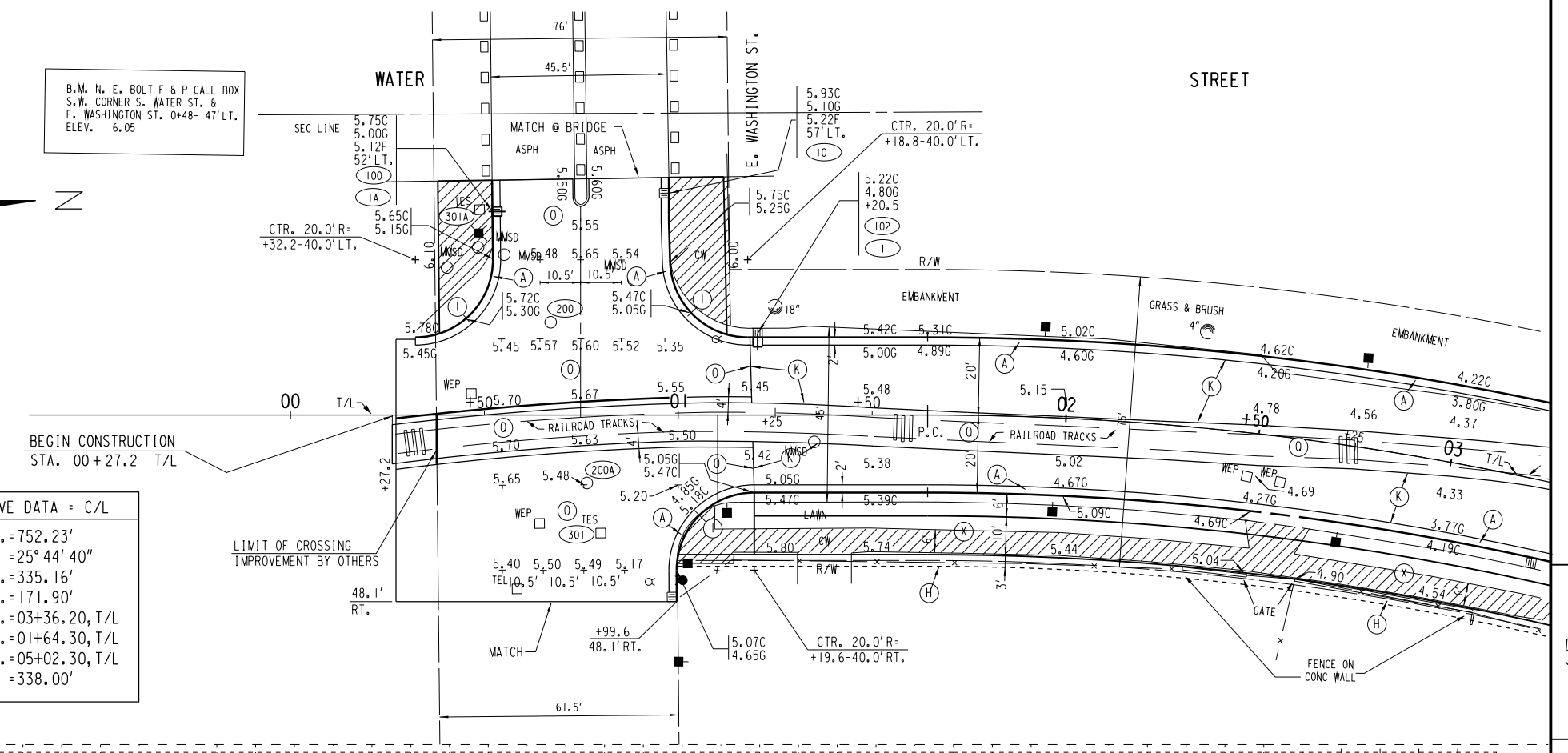
Construction Permits for Work Adjacent to City of Milwaukee ROW						
Parcel No.	Tax Key No.	Property Owner(s)	Address	Station to Station	Offset from Centerline	Private ROW Affected
1	42900591114	Miller Compressing Corporation	900 S Water Street	STA. 03+80 to STA. 04+65, STA. 05+03 to STA. 05+17, STA. 06+00 to STA. 06+41	56 ft Right	~19 ft
2	4290053000	Paul Mueller	820 S Water Street	STA. 10+41 to STA. 10+61, STA. 10+71 to STA. 10+82	41 ft Right	~3.5 ft

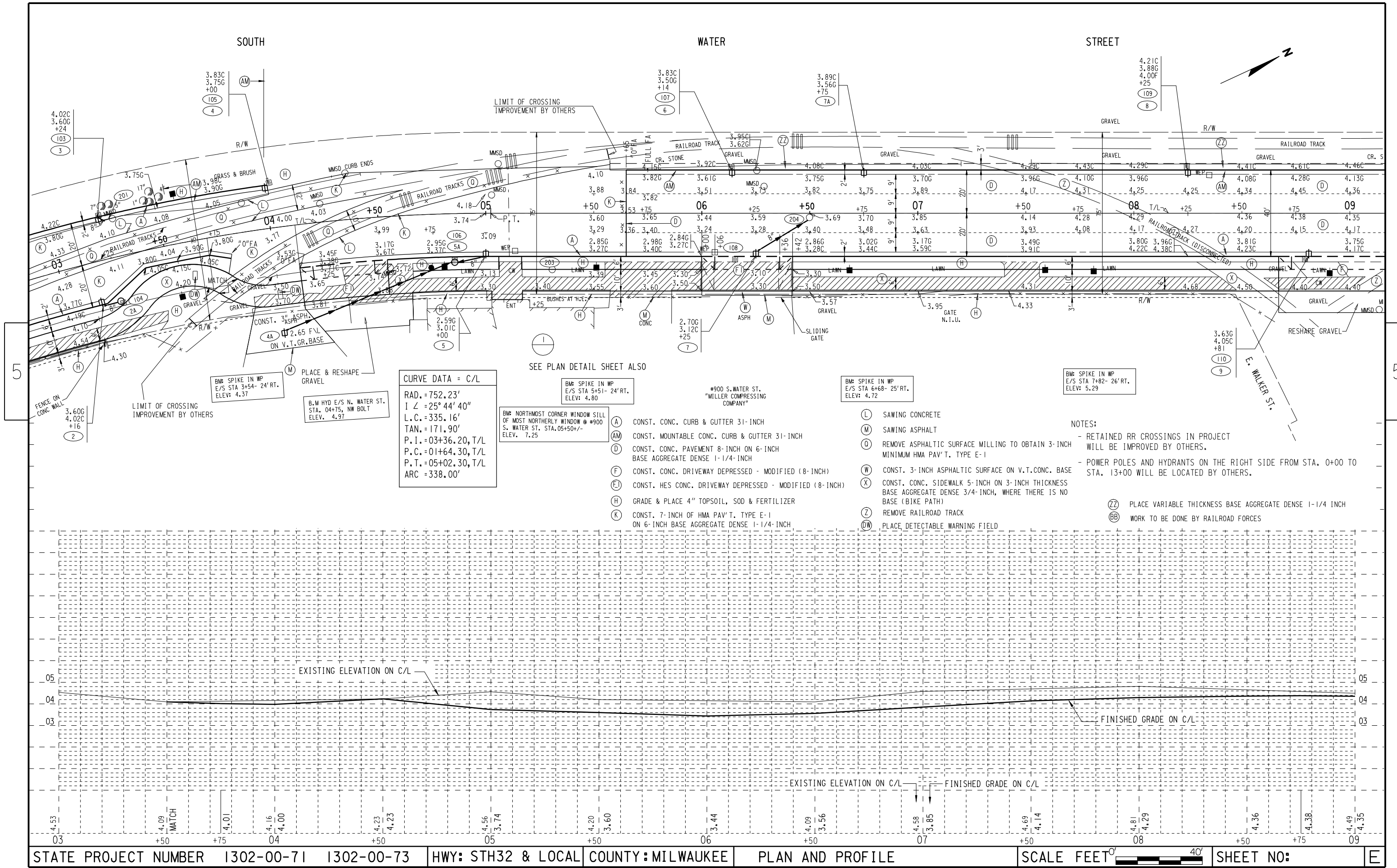
NOTES:
- RETAINED RR CROSSINGS IN PROJECT
WILL BE IMPROVED BY OTHERS.
- POWER POLES AND HYDRANTS ON THE RIGHT SIDE FROM STA. 0+00 TO
STA. 13+00 WILL BE LOCATED BY OTHERS.

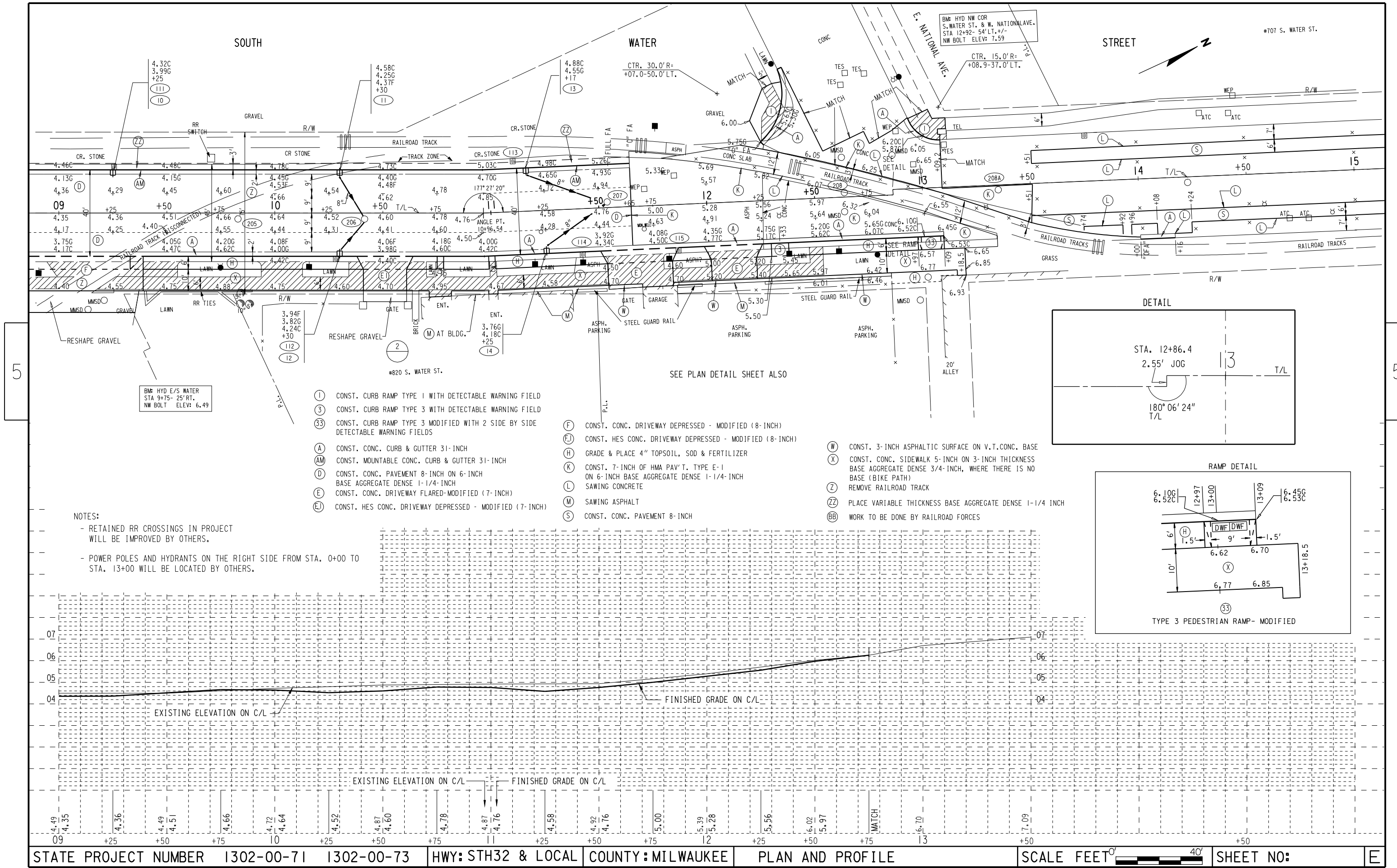
- (I) CONST. CURB RAMP TYPE I WITH DETECTABLE WARNING FIELD
- (A) CONST. CONC. CURB & GUTTER 31-INCH
- (H) GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER
- (K) CONST. 7-INCH OF HMA PAV'T. TYPE E-1
ON 6-INCH BASE AGGREGATE DENSE 1-1/4-INCH
- (O) REMOVE ASPHALTIC SURFACE BUTT JOINTS TO OBTAIN 3-INCH
MINIMUM HMA PAV'T. TYPE E-1
- (D) REMOVE ASPHALTIC SURFACE MILLING
- (X) CONST. CONC. SIDEWALK 5-INCH ON 3-INCH THICKNESS
BASE AGGREGATE DENSE 3/4-INCH, WHERE THERE IS NO
BASE (BIKE PATH)

CURVE DATA = C/L
RAD. = 752.23'
I $\angle$ = 25° 44' 40"
L.C. = 335.16'
TAN. = 171.90'
P.I. = 03+36.20, T/L
P.C. = 01+64.30, T/L
P.T. = 05+02.30, T/L
ARC = 338.00'

B.M. N. E. BOLT F & P CALL BOX
S.W. CORNER S. WATER ST. &
E. WASHINGTON ST. 0+48- 47' LT.
ELEV. 6.05



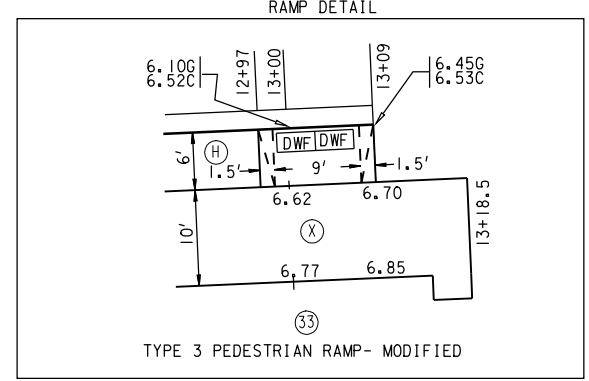
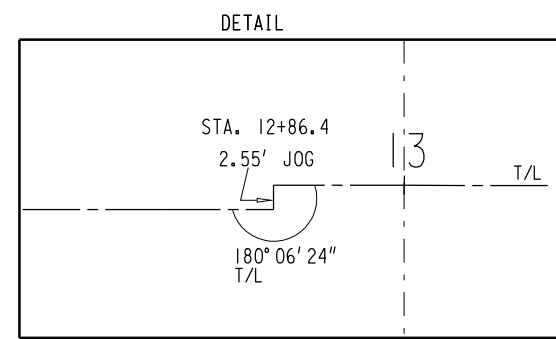


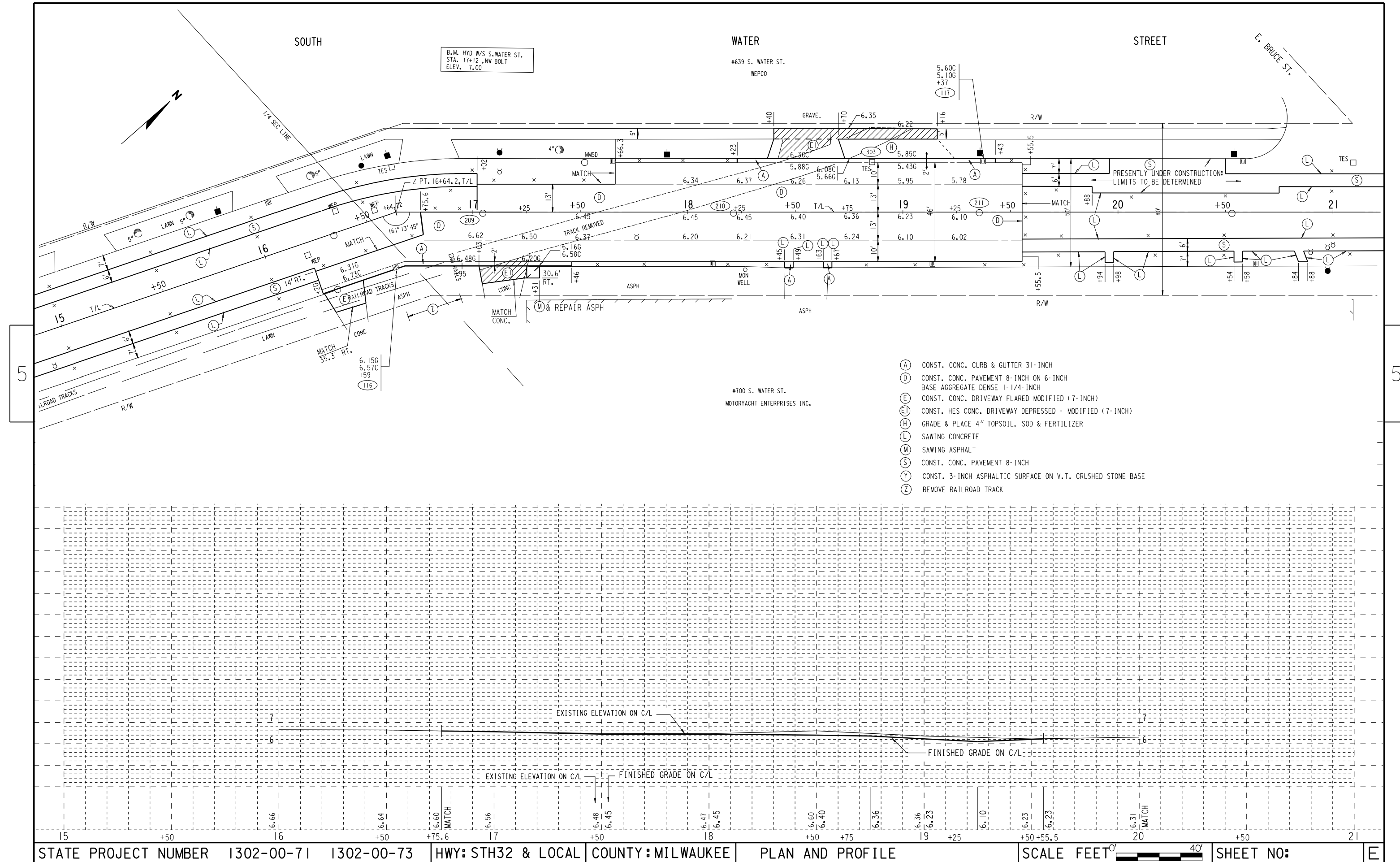


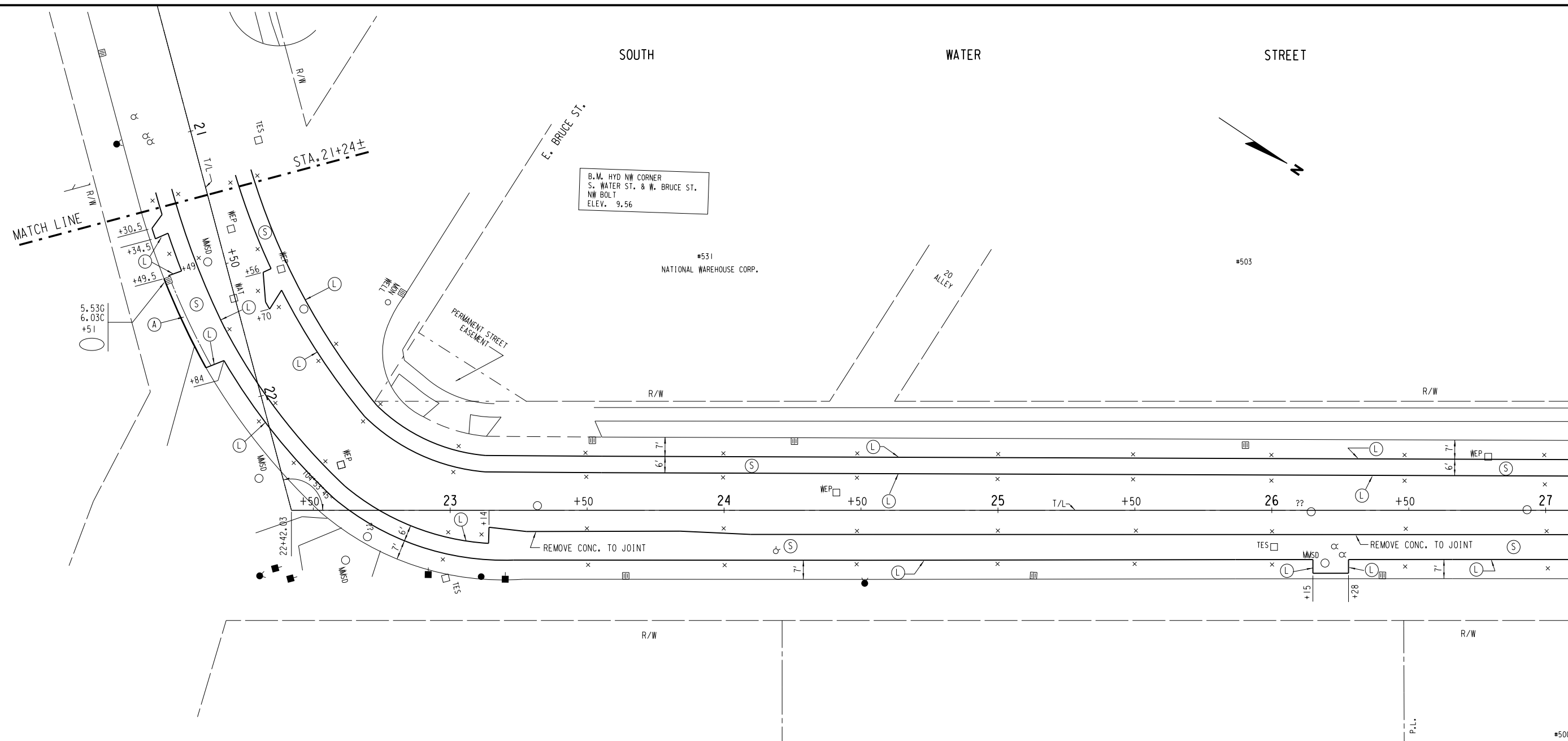
NOTES:

- RETAINED RR CROSSINGS IN PROJECT WILL BE IMPROVED BY OTHERS.
- POWER POLES AND HYDRANTS ON THE RIGHT SIDE FROM STA. 0+00 TO STA. 13+00 WILL BE LOCATED BY OTHERS.

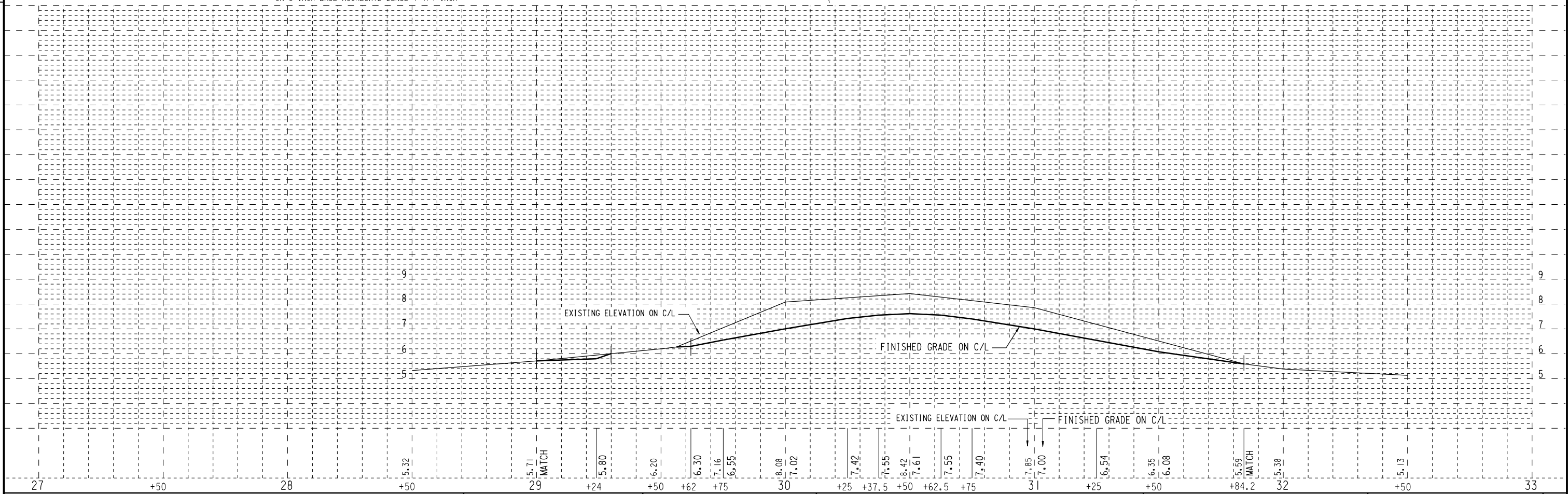
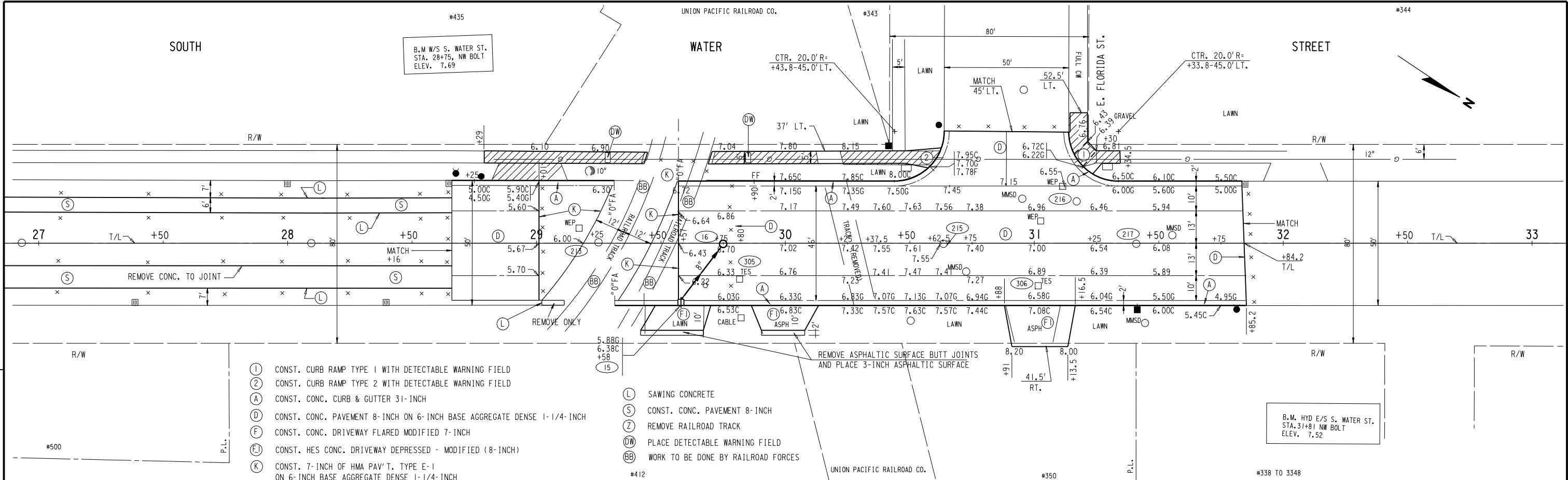
- | | | |
|---|---|---|
| ① CONST. CURB RAMP TYPE 1 WITH DETECTABLE WARNING FIELD | ⓕ CONST. CONC. DRIVEWAY DEPRESSED - MODIFIED (8-INCH) | Ⓜ CONST. 3-INCH ASPHALTIC SURFACE ON V.T.CONC. BASE |
| ③ CONST. CURB RAMP TYPE 3 WITH DETECTABLE WARNING FIELD | ⓔ CONST. HES CONC. DRIVEWAY DEPRESSED - MODIFIED (8-INCH) | Ⓧ CONST. CONC. SIDEWALK 5-INCH ON 3-INCH THICKNESS |
| ③③ CONST. CURB RAMP TYPE 3 MODIFIED WITH 2 SIDE BY SIDE DETECTABLE WARNING FIELDS | ⓓ GRADE & PLACE 4" TOPSOIL, SOD & FERTILIZER | BASE AGGREGATE DENSE 3/4-INCH, WHERE THERE IS NO |
| | Ⓚ CONST. 7-INCH OF HMA PAV'T. TYPE E-1 | BASE (BIKE PATH) |
| ⓐ CONST. CONC. CURB & GUTTER 31-INCH | ON 6-INCH BASE AGGREGATE DENSE 1-1/4-INCH | |
| ⓐⓂ CONST. MOUNTABLE CONC. CURB & GUTTER 31-INCH | Ⓛ SAWING CONCRETE | Ⓩ REMOVE RAILROAD TRACK |
| ⓓ CONST. CONC. PAVEMENT 8-INCH ON 6-INCH | | ⓏⓏ PLACE VARIABLE THICKNESS BASE AGGREGATE DENSE 1-1/4 INCH |
| BASE AGGREGATE DENSE 1-1/4-INCH | Ⓜ SAWING ASPHALT | |
| ⓔ CONST. CONC. DRIVEWAY FLARED-MODIFIED (7-INCH) | Ⓢ CONST. CONC. PAVEMENT 8-INCH | ⓈⓈ WORK TO BE DONE BY RAILROAD FORCES |
| ⓔⓈ CONST. HES CONC. DRIVEWAY DEPRESSED - MODIFIED (7-INCH) | | |







- (A) CONST. CONC. CURB & GUTTER 31-INCH
- (L) SAWING CONCRETE
- (S) CONST. CONC. PAVEMENT 8-INCH



EAST

PITTSBURGH

AVENUE

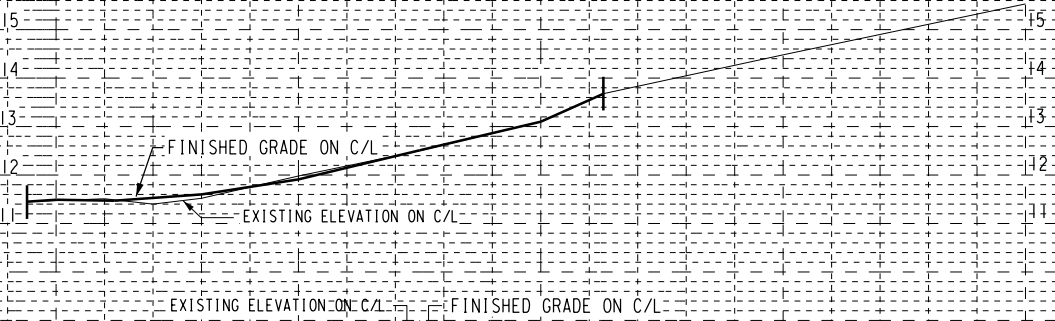
MILWAUKEE

RIVER

B.M. NW'LY CORNER
RETAINING WALL
S. WATER ST. & E. PITTSBURGH ST.
02 + 07.8 = 55.7' LT.
ELEV. = 12.90

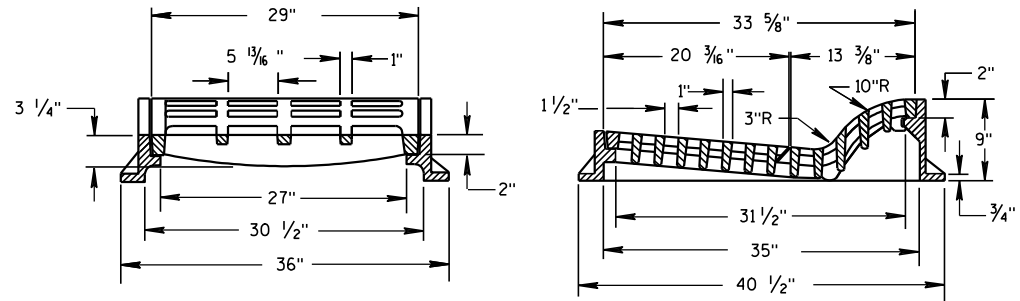
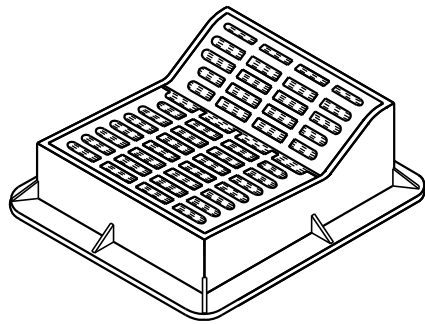
BROADWAY BASCULE BRIDGE
(SEE STRUCTURE PLANS
FOR WORK ON BRIDGE)

- (I) CONST. CURB RAMP TYPE I WITH DETECTABLE WARNING FIELD
- (A) CONST. CONC. CURB & GUTTER 31-INCH
- (L) SAWING CONCRETE
- (O) REMOVE ASPHALTIC SURFACE BUTT JOINTS TO OBTAIN 3-INCH MINIMUM HMA PAV'T. TYPE E-1
- (R) CONST. 9-INCH CONC. PAVEMENT WITH INTEGRAL CURB & GUTTER 31-INCH (BUS PAD)
- (AA) CONST. CONC. CURB & GUTTER 22-INCH
- (DD) CONST. CONC. LOADING ZONE WITH 7-INCH FACE



Standard Detail Drawing List

08A05-18C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D16-10	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
13C01-16	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-08	URBAN DOWELED CONCRETE PAVEMENT
13C15-05A	CONCRETE BASE
13C15-05B	CONCRETE BASE
13C18-02A	CONCRETE PAVEMENT JOINTING
13C18-02B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-02C	CONCRETE PAVEMENT JOINT TIES
13C18-02D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
15C08-15A	PAVEMENT MARKING (MAINLINE)
15C08-15B	PAVEMENT MARKING (INTERSECTIONS)
15C11-05	FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES
15C29-03C	URBAN BICYCLE LANE MARKING
15C29-03D	URBAN BICYCLE LANE MARKING
15C29-03F	PAVEMENT MARKING FOR SHARED LANE 35 MPH OR LESS
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING



TYPE "F"

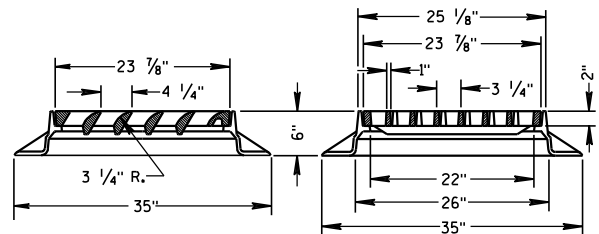
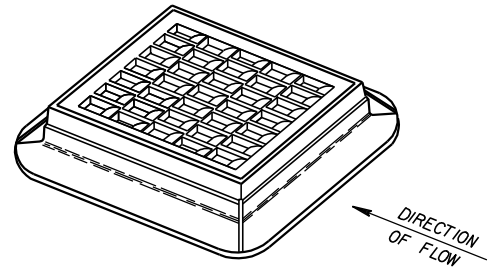
(APPROXIMATE WEIGHT 644 LBS.)

FRAME.....302 LBS.

GRATE.....160 LBS.

GRATE.....182 LBS.

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

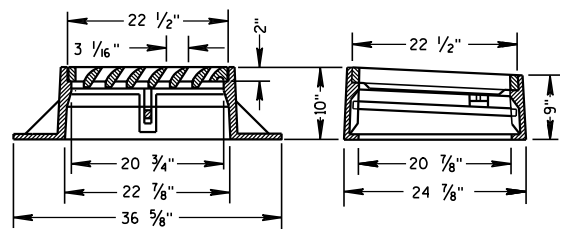
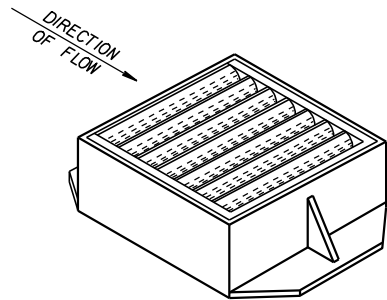


TYPE "S"

(APPROXIMATE WEIGHT 333 LBS.)

FRAME.....164 LBS.

GRATE.....169 LBS.



TYPE "V"

(APPROXIMATE WEIGHT 410 LBS.)

FRAME.....269 LBS.

GRATE.....136 LBS.

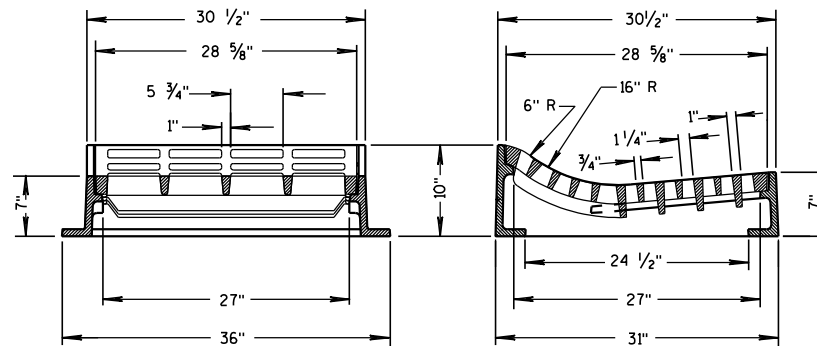
SAFETY BAR.....5 LBS.

**ALTERNATIVE CURB BOX
FOR TYPE "HM" COVER**

(APPROXIMATE WEIGHT CURB BOX 68 LBS.)

USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE



TYPE "T"

(APPROXIMATE WEIGHT 530 LBS.)

FRAME.....270 LBS.

GRATE.....260 LBS.

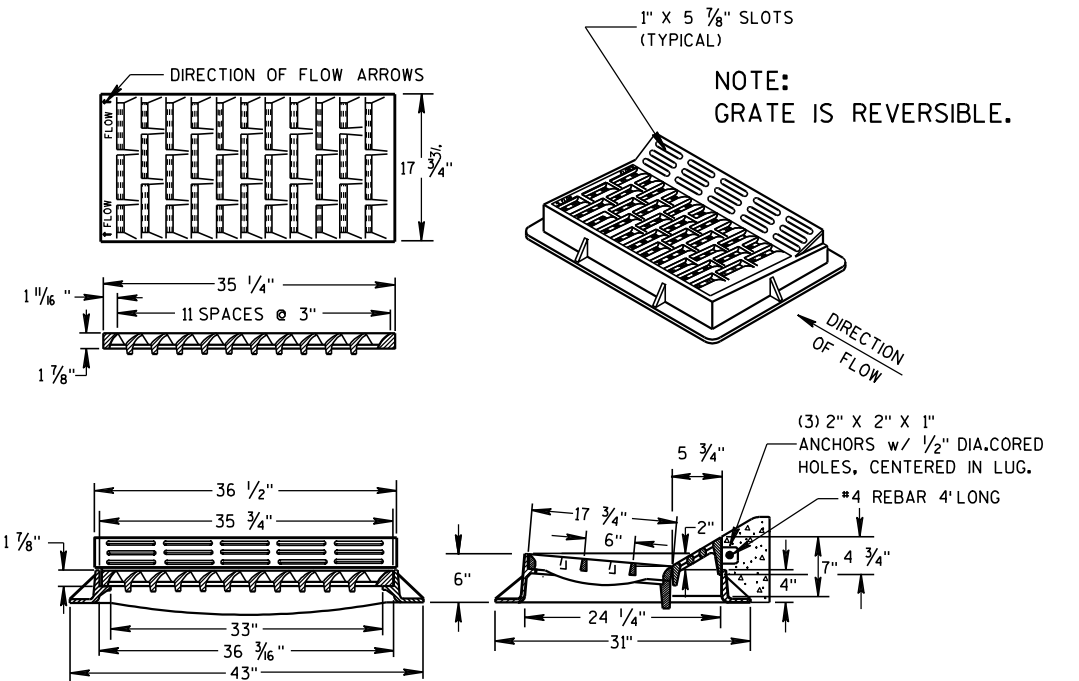
USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.

GENERAL NOTES

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

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

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



TYPE "HM"

(APPROXIMATE WEIGHT 414 LBS.)

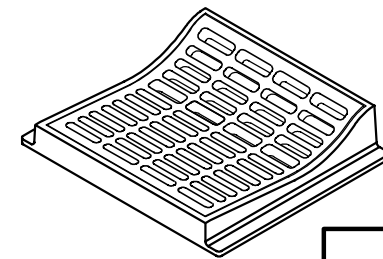
FRAME.....181 LBS.

GRATE.....159 LBS.

CURB BOX.....74 LBS.

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

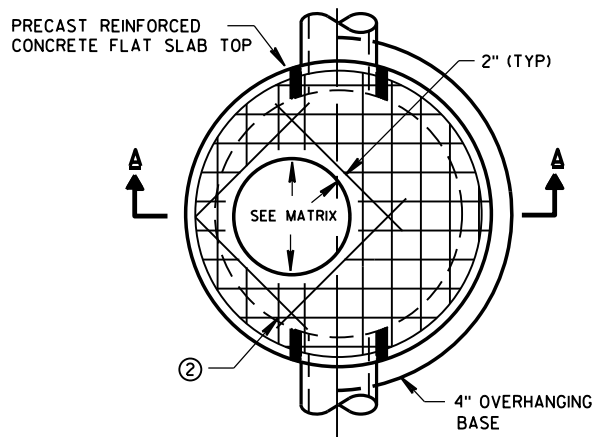
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



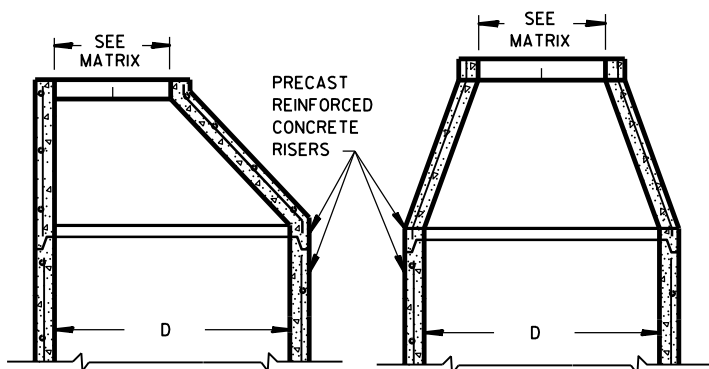
**INLET COVERS
TYPE F, HM, HM-S, S, T, V,
HM-GJ, & HM-GJ-S**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

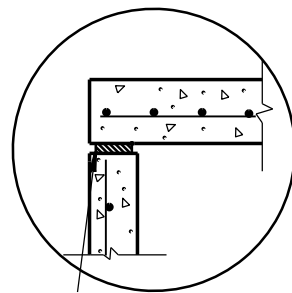


PLAN VIEW CIRCULAR OPENING

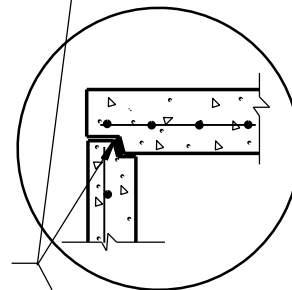


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

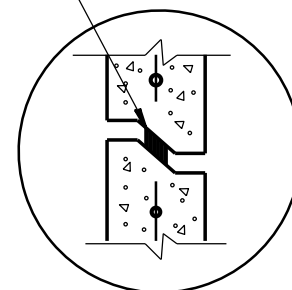
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



TOP WITH PLAIN END JOINT



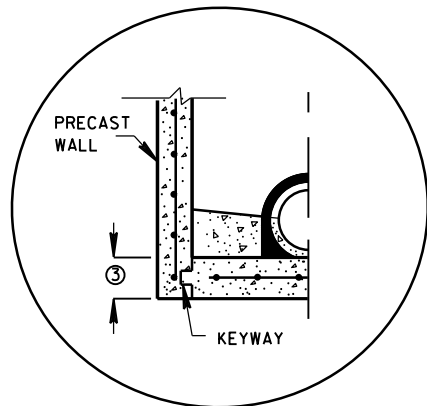
TOP WITH TONGUE AND GROOVE JOINT



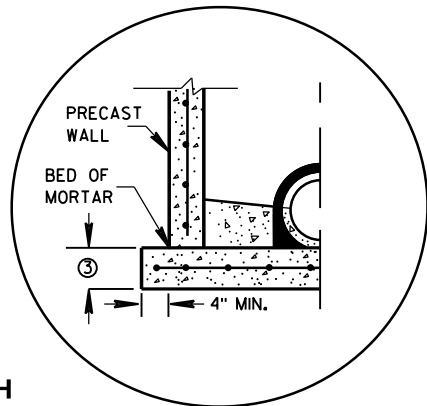
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

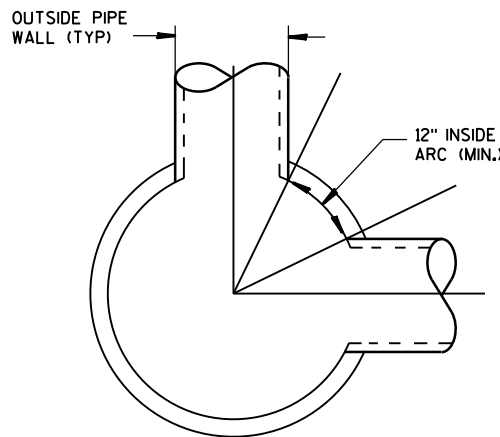


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

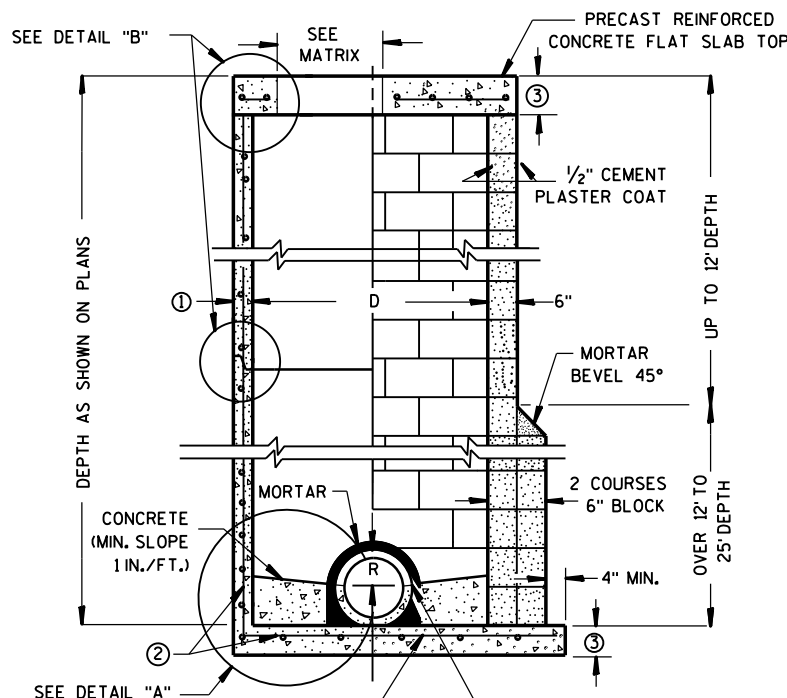


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"



CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

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

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 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".

- ① 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.
- ② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ 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

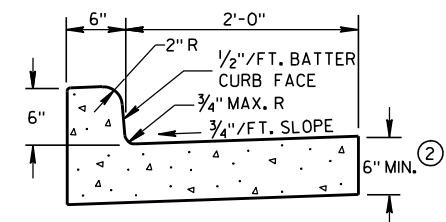
PIPE MATRIX

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

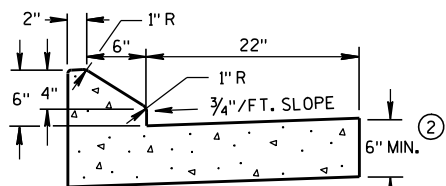
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

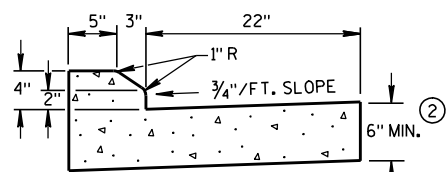
APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA ENGINEER



TYPES A & D ①

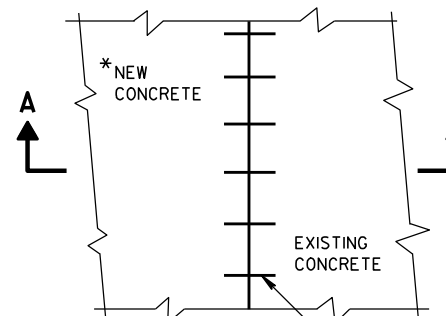


6" SLOPED CURB TYPES G & J ①



4" SLOPED CURB TYPES G & J ①

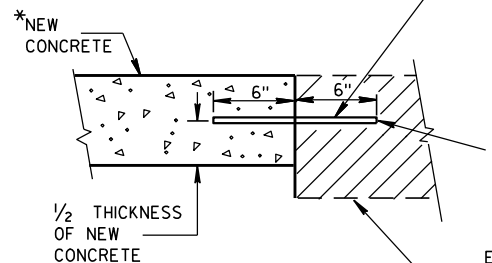
CONCRETE CURB & GUTTER 30"



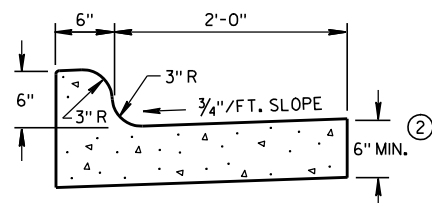
PLAN VIEW

* NEW CURB & GUTTER,
SURFACE DRAINS,
CONCRETE PAVEMENT
OR OTHER NEW CONCRETE.

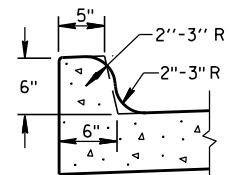
NO. 6 TIE BARS SPACED 2'-6" C-C,
INSTALLED PERPENDICULAR
TO THE LONGITUDINAL JOINT.



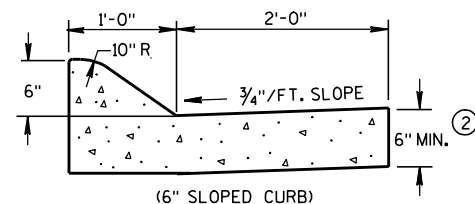
SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT



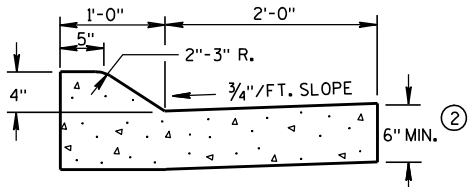
TYPES K & L ①



OPTIONAL CURB SHAPE
FOR TYPES K & L ①

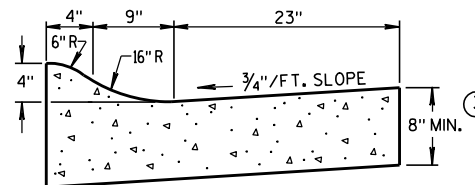


(6" SLOPED CURB)

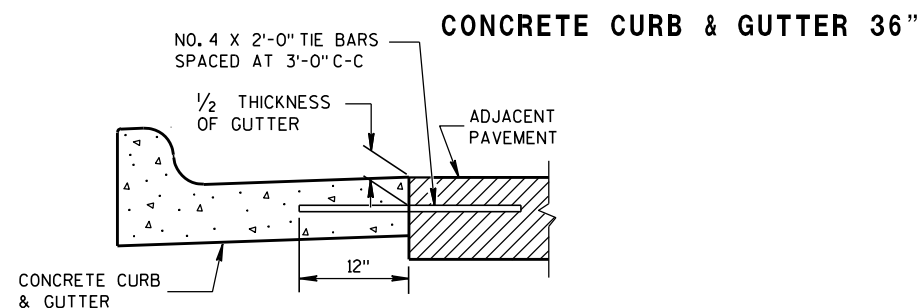


(4" SLOPED CURB)

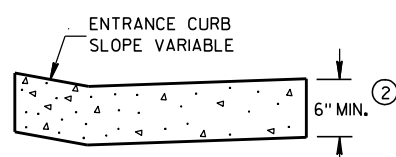
TYPES A & D ①



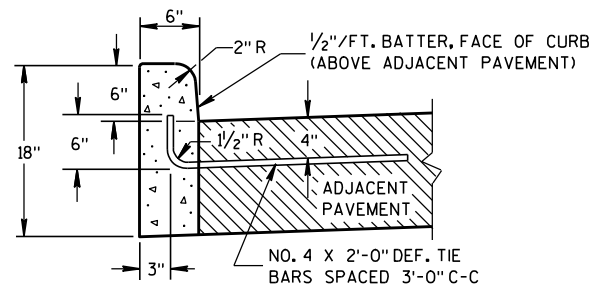
4" SLOPED CURB TYPES R & T ① ④



TYPICAL TIE BAR LOCATION ①

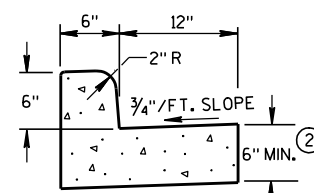


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

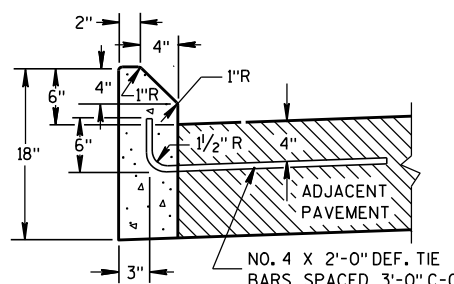


TYPES A & D ①

CONCRETE CURB



TYPES A & D
CONCRETE CURB & GUTTER 18"



TYPES G & J ①

GENERAL NOTES

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

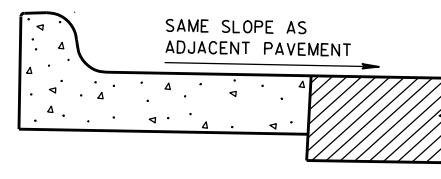
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

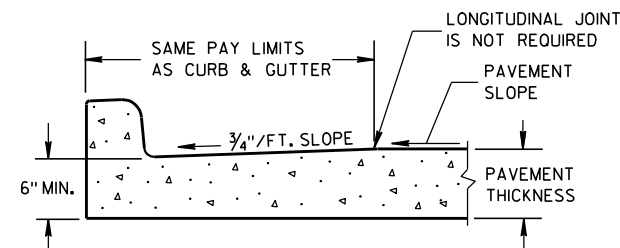
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

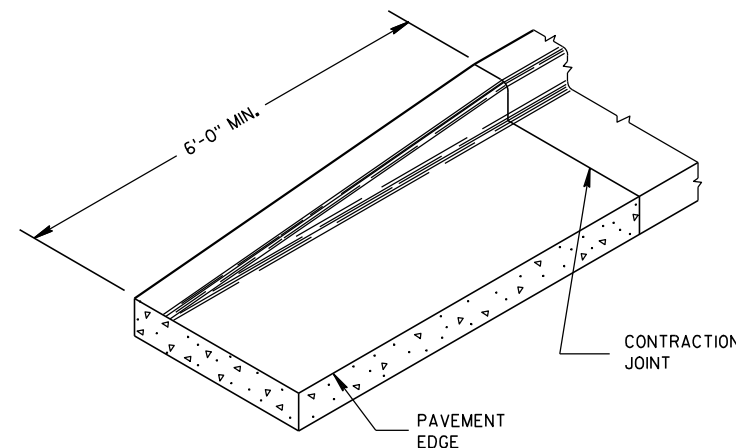
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



REVERSE SLOPE GUTTER ⑤
(TYPICAL FOR ALL CURB & GUTTER TYPES)



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

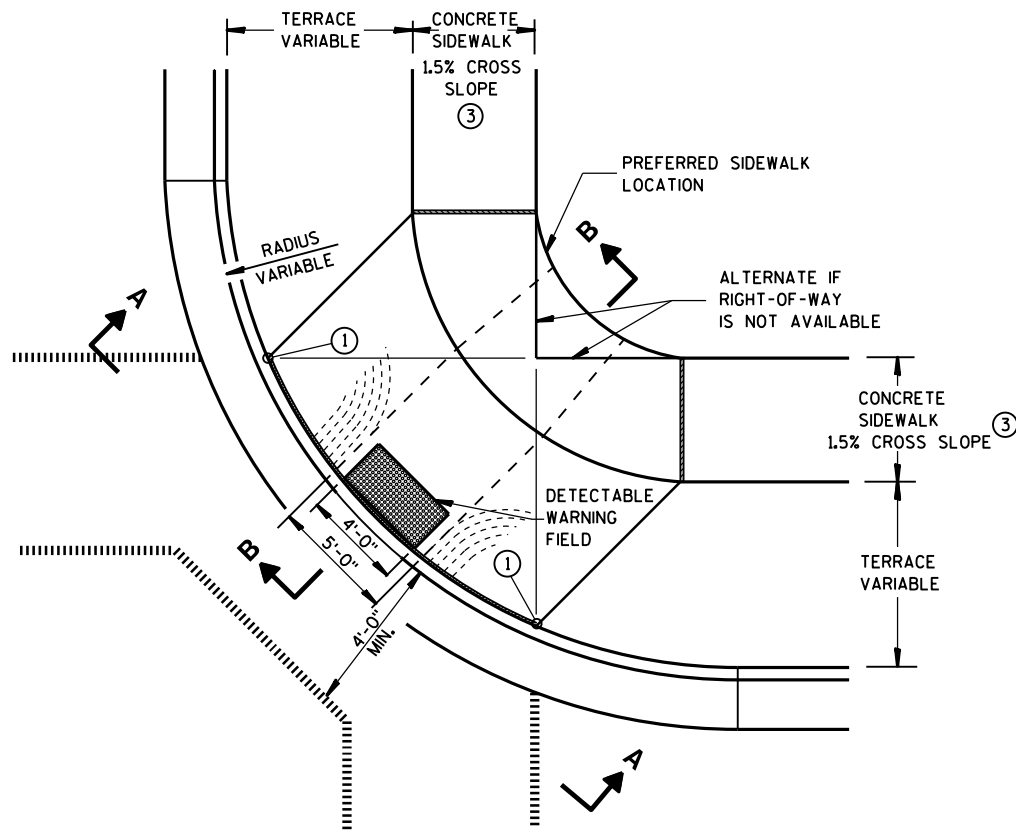
APPROVED

9/4/08

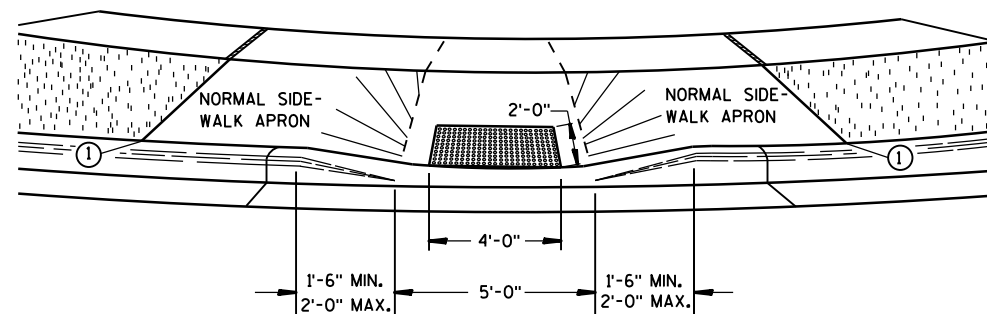
DATE

FHWA

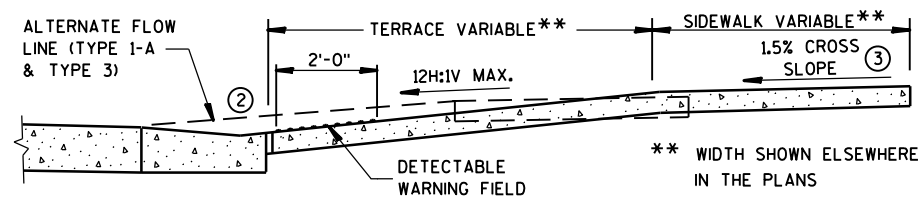
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



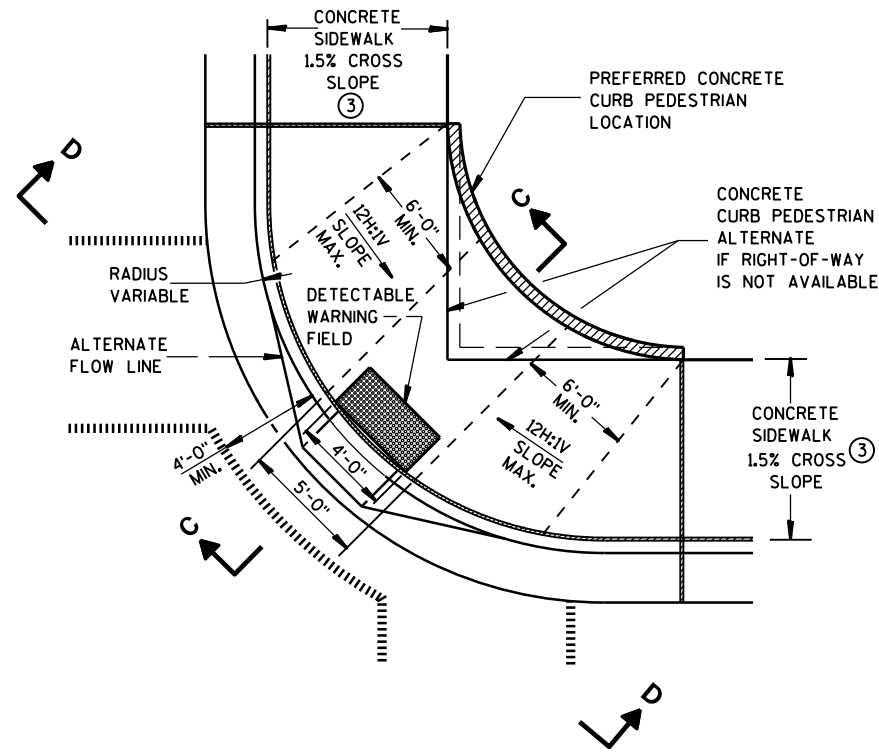
**PLAN VIEW
TYPE 1 RAMP**
(CENTER OF CORNER RADIUS)



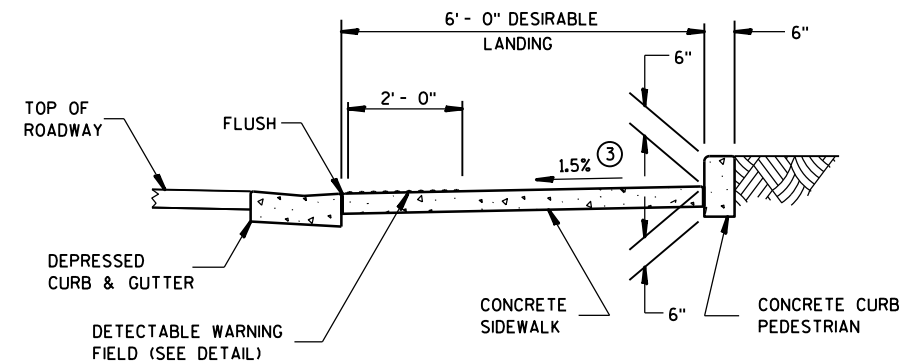
VIEW A-A



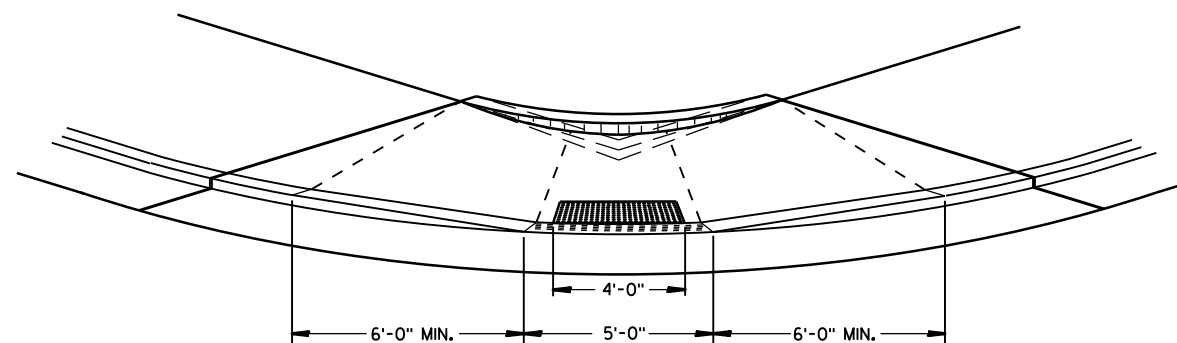
SECTION B-B



**PLAN VIEW
TYPE 1-A RAMP**
(NO TERRACE)



SECTION C-C



VIEW D-D

GENERAL NOTES

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

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

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

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

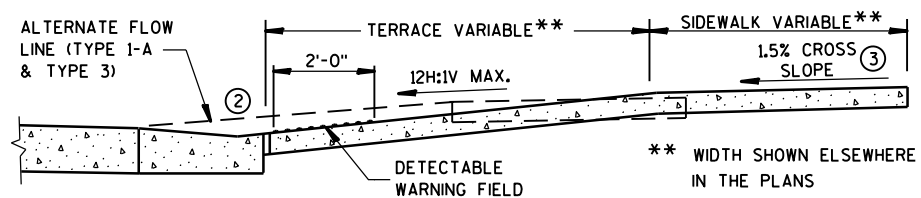
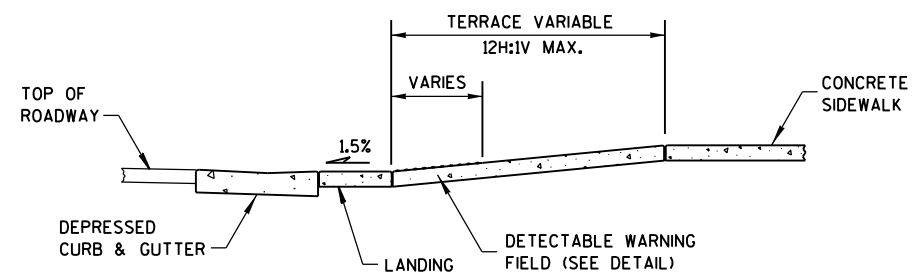
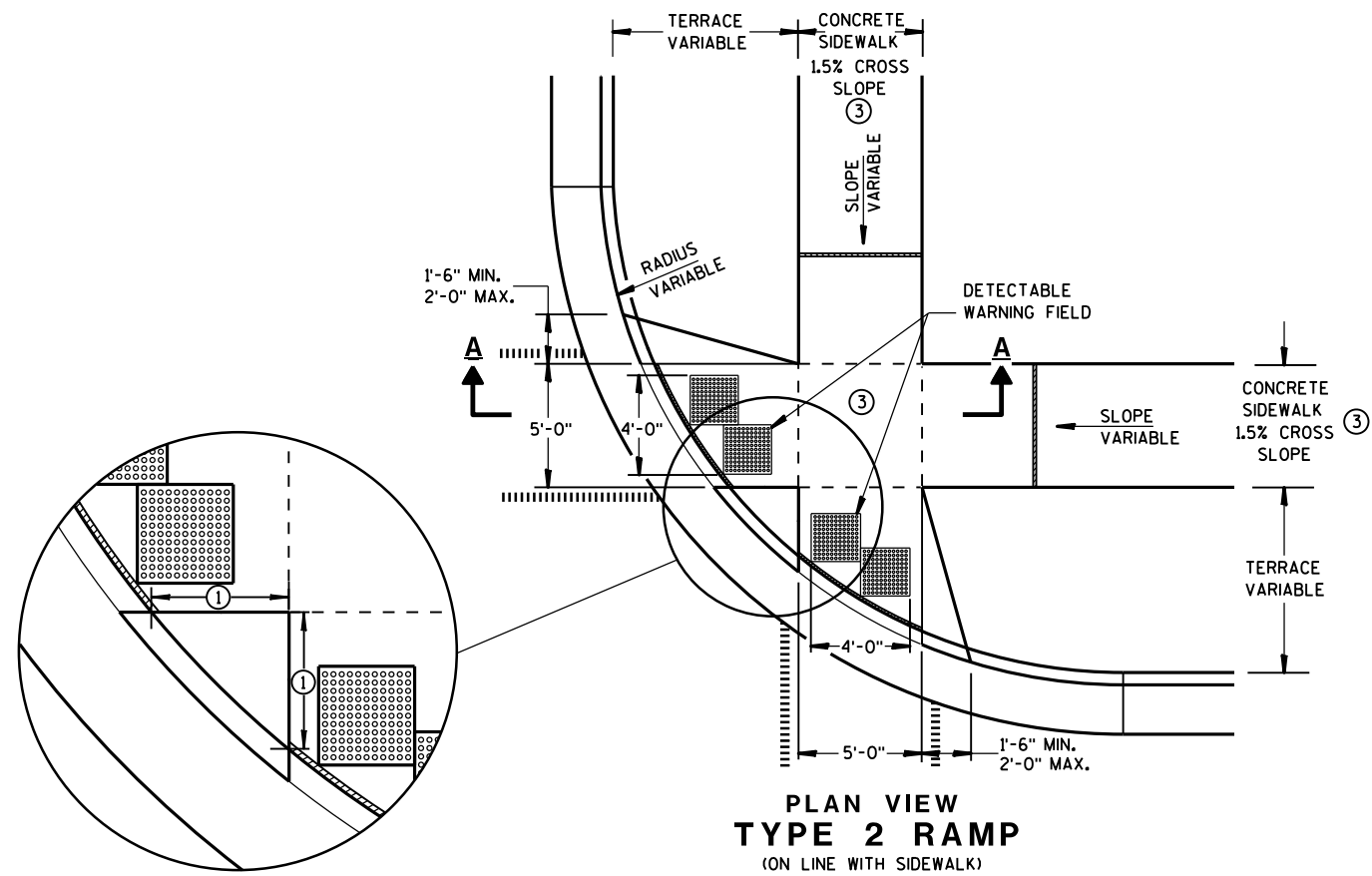
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.
- ③ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

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

**CURB RAMPS
TYPES 1 AND 1-A**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

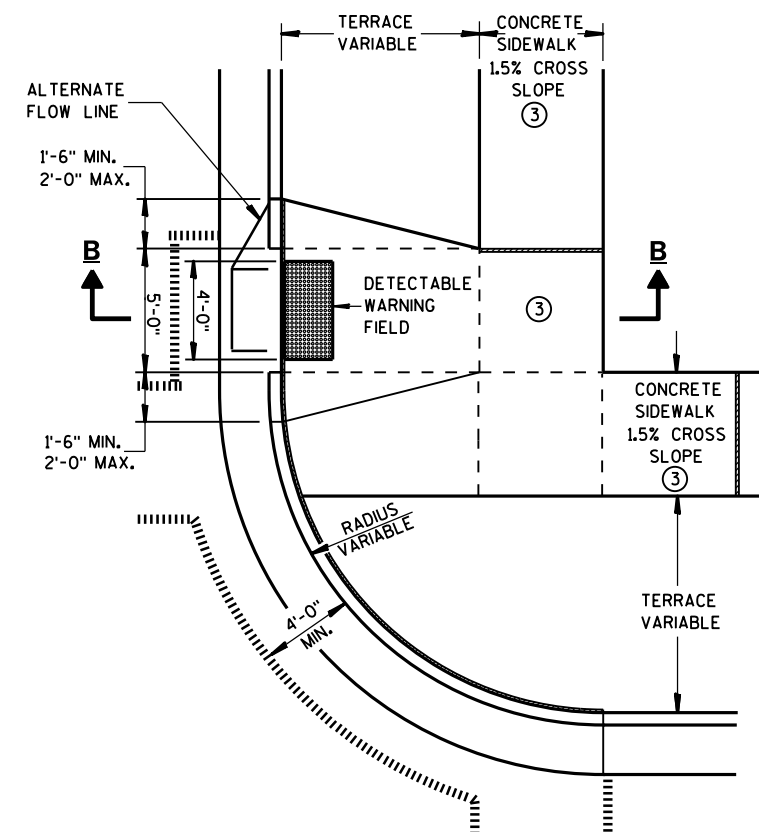
USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

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

- ① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.
- ③ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

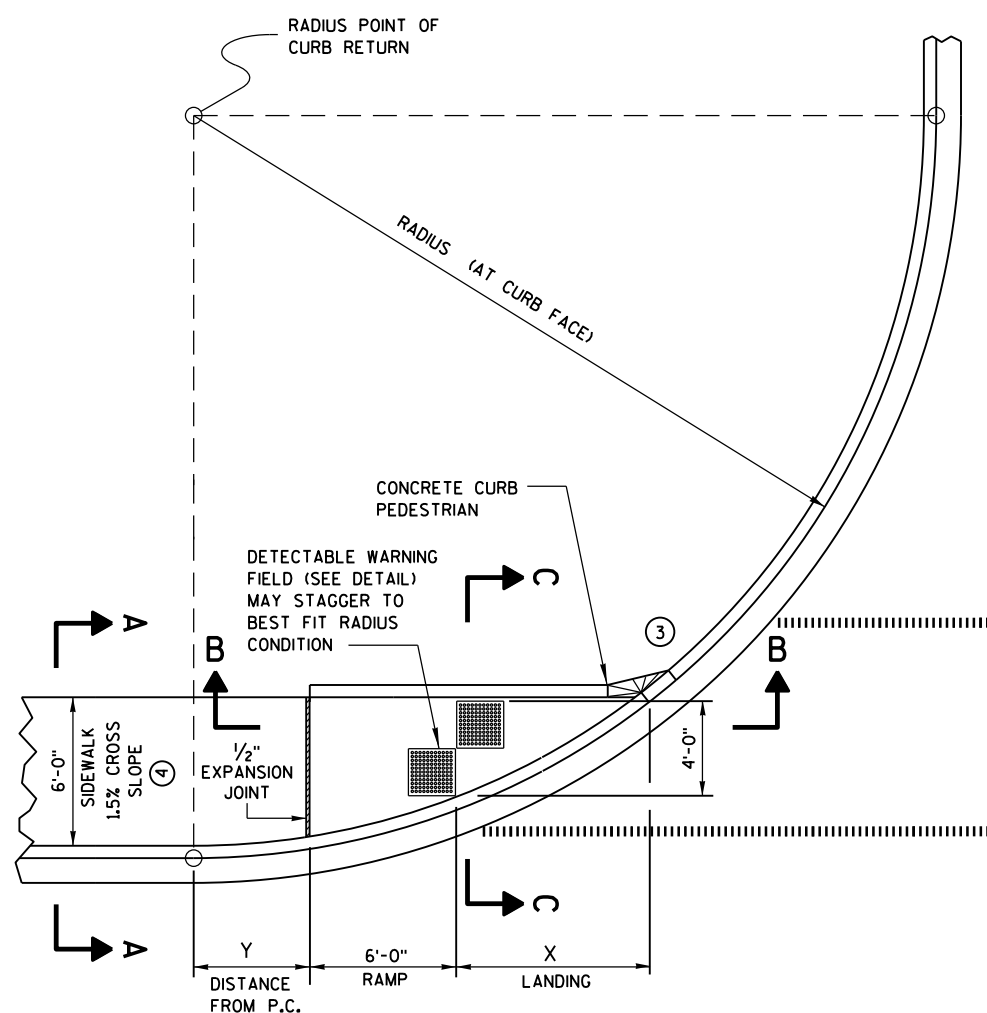
LEGEND

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



**CURB RAMPS
TYPES 2 AND 3**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

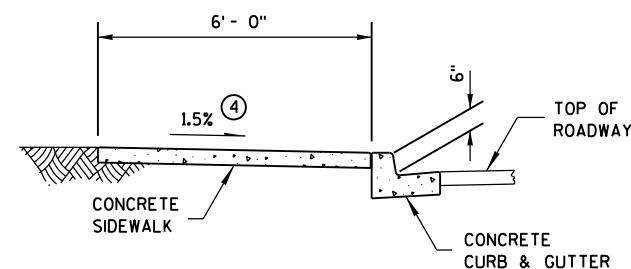
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

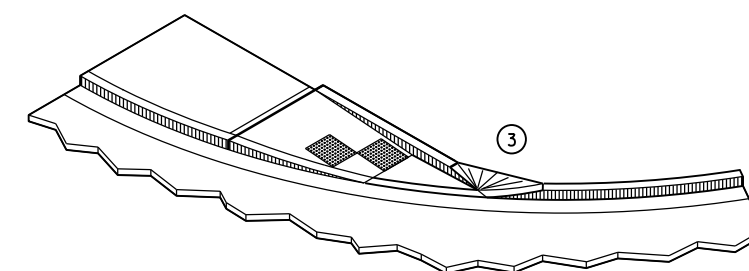
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

③ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.)
DO NOT MARK TRANSITION NOSE.

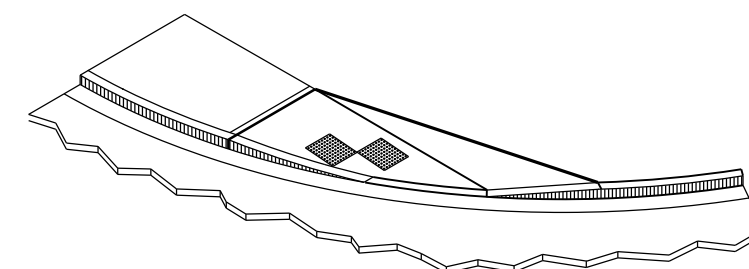
④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



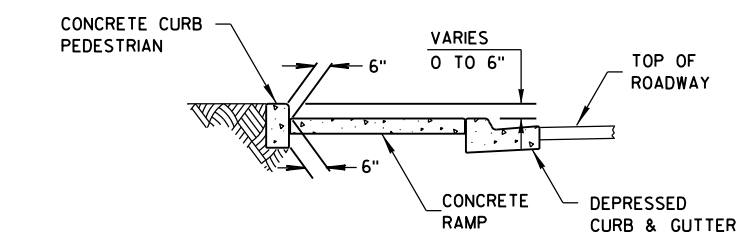
SECTION A-A FOR TYPE 4A



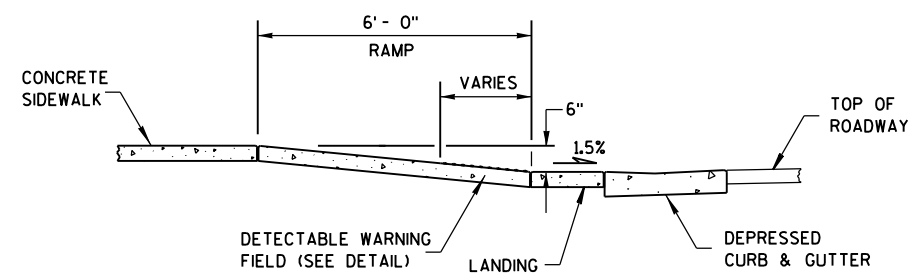
ISOMETRIC VIEW FOR TYPE 4A



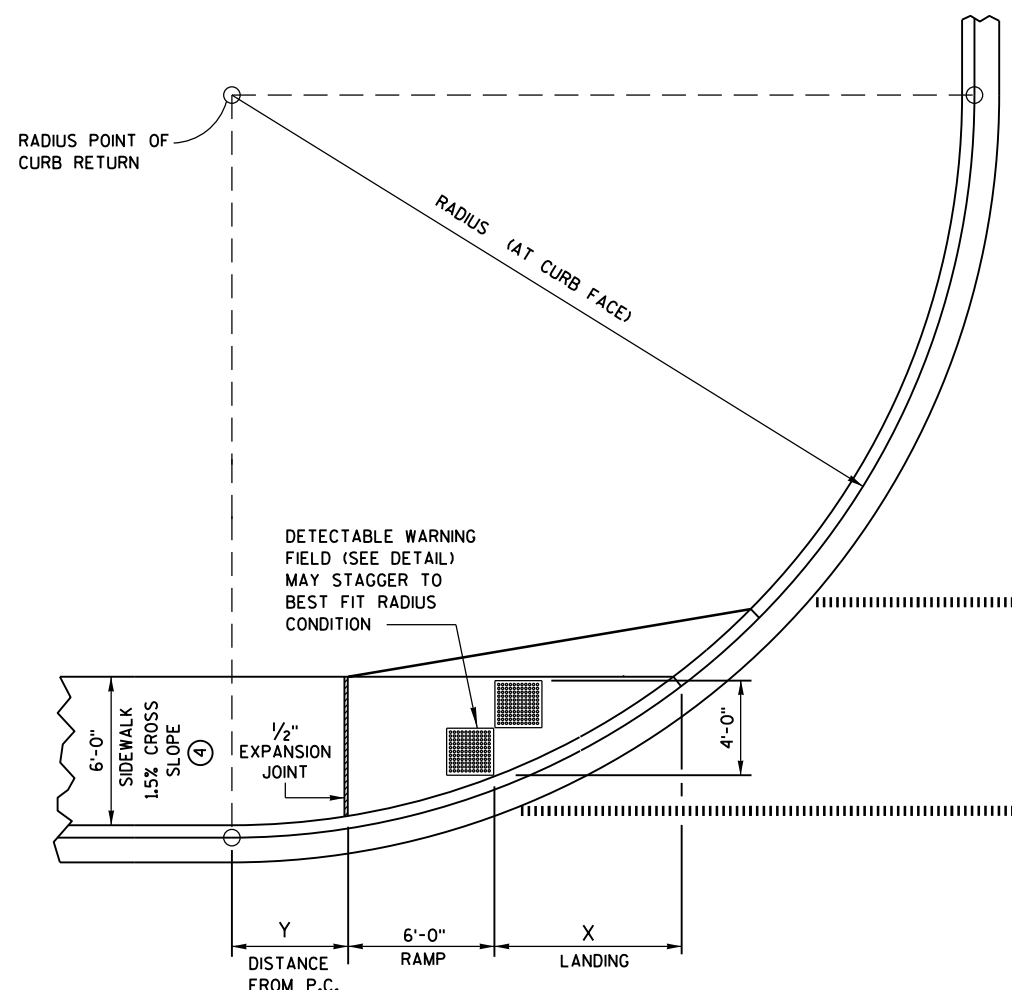
ISOMETRIC VIEW FOR TYPE 4A1



SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW

LEGEND

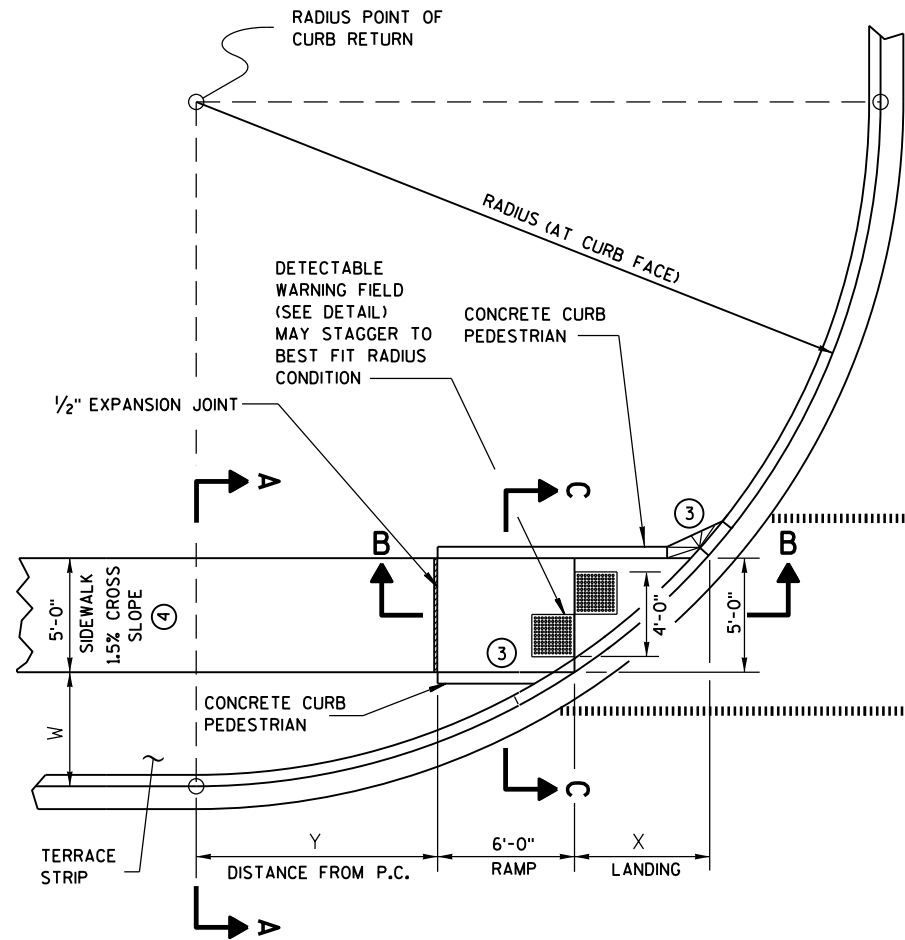
 1/2" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

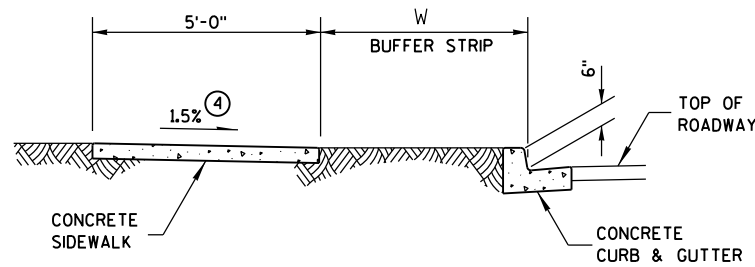
PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPES 4A AND 4A1

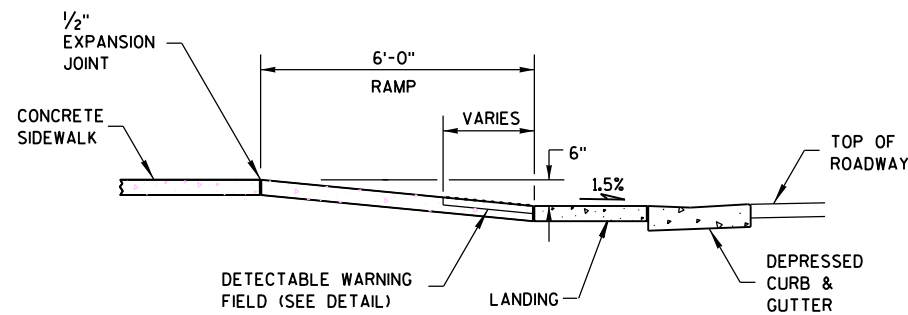
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**CURB RAMP TYPE 4B
PLAN VIEW**



SECTION A-A FOR TYPE 4B

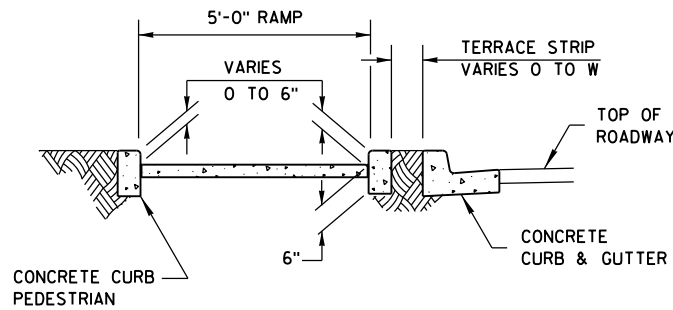


SECTION B-B FOR TYPE 4B

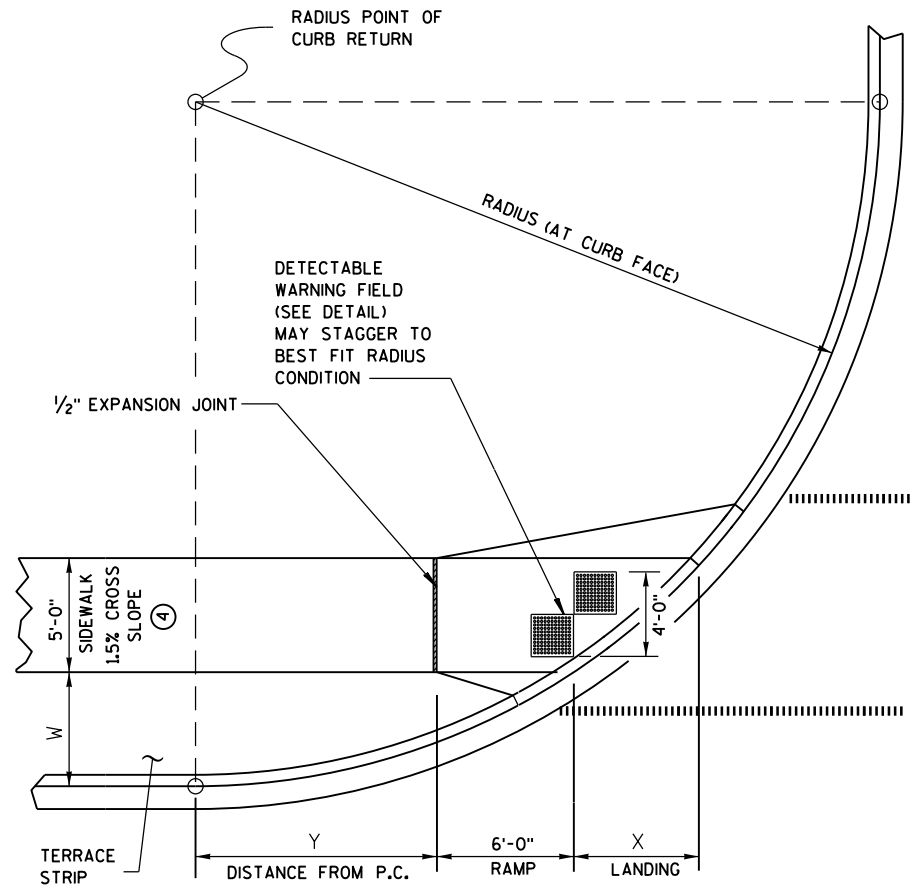
- LEGEND**
- 1/2" EXPANSION JOINT-SIDEWALK
 - CONTRACTION JOINT FIELD LOCATED
 - PAVEMENT MARKING CROSSWALK (WHITE)

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5 1/2"	4'-6 1/2"	4'-8 1/2"	6'-0"	4'-1"	7'-2 3/4"	3'-7"	8'-3 1/2"	3'-1 1/2"	9'-2 1/2"
30 FEET	7'-3 3/4"	7'-1"	6'-5 1/2"	8'-11 1/2"	5'-9 1/4"	10'-7"	5'-2 1/2"	12'-0"	4'-8 3/4"	13'-3 1/4"
40 FEET	8'-9 1/2"	9'-2 1/2"	7'-10"	11'-5 1/4"	7'-1"	13'-4 1/2"	6'-5 3/4"	15'-3/4"	5'-11 1/2"	16'-7 1/4"
50 FEET	10'-3/4"	11'-3/4"	9'-1/4"	13'-7 1/4"	8'-2 1/2"	15'-9 1/2"	7'-6 1/2"	17'-9"	6'-11 3/4"	19'-6 1/4"
60 FEET	11'-2 1/2"	12'-8 3/4"	10'-3/4"	15'-6 1/2"	9'-2 1/4"	17'-11 3/4"	8'-5 3/4"	20'-1 3/4"	7'-10 1/2"	22'-1 1/2"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION C-C FOR TYPE 4B



**CURB RAMP TYPE 4B1
PLAN VIEW**

GENERAL NOTES

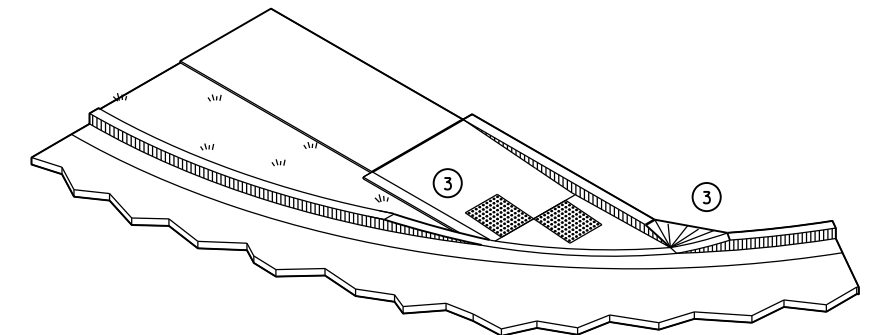
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

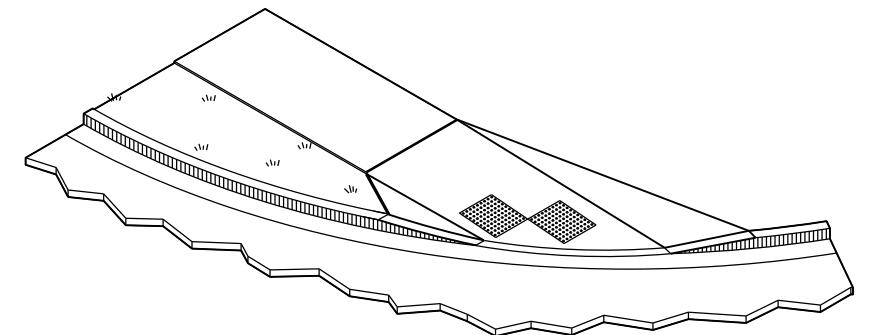
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

③ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



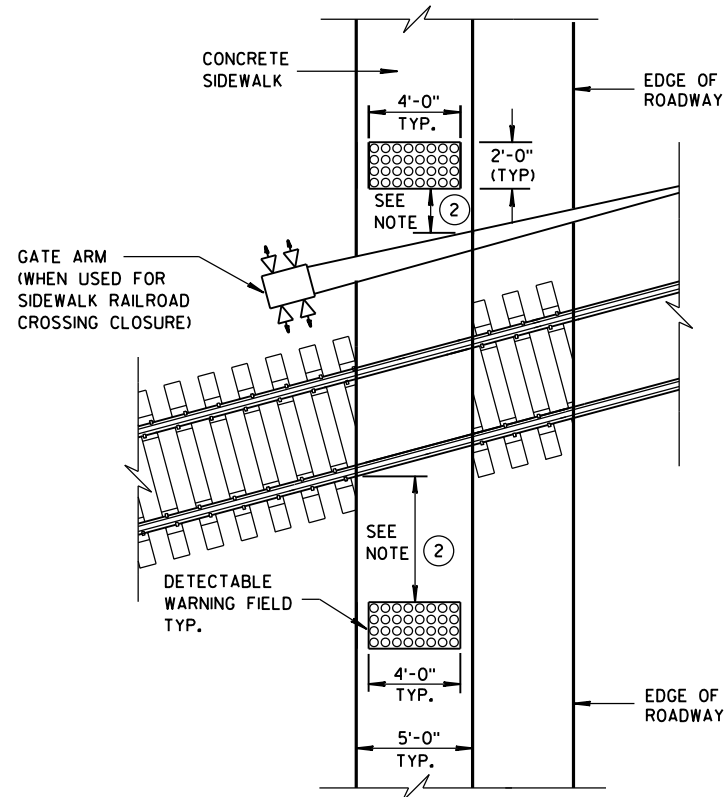
ISOMETRIC VIEW FOR TYPE 4B



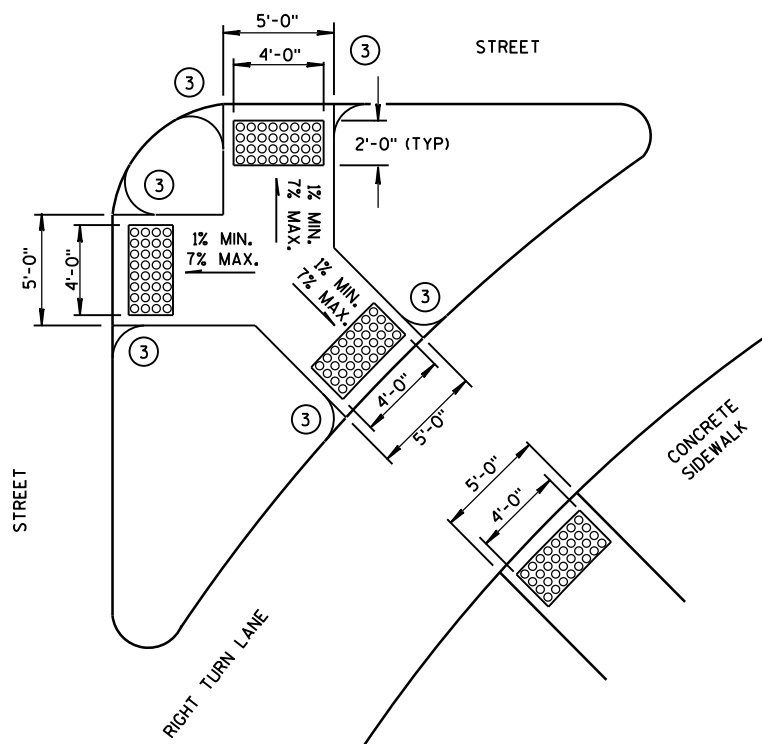
ISOMETRIC VIEW FOR TYPE 4B1

**CURB RAMPS
TYPE 4B AND 4B1**

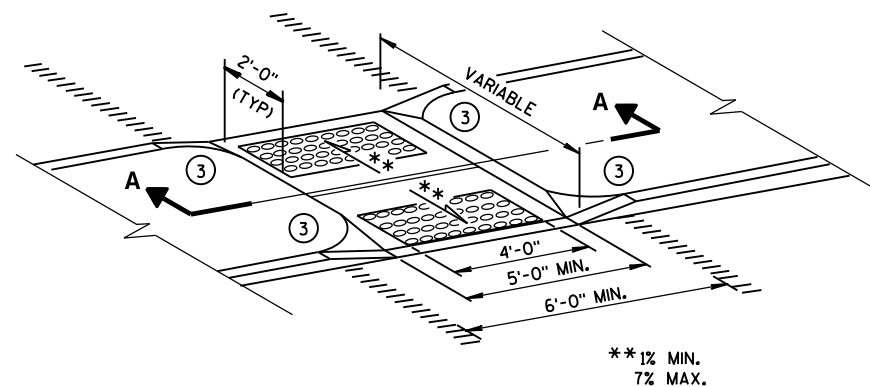
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



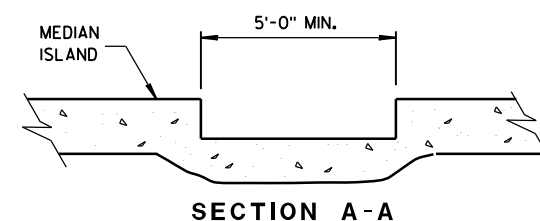
TYPE 8
DETECTABLE WARNINGS
AT RAILROAD CROSSING



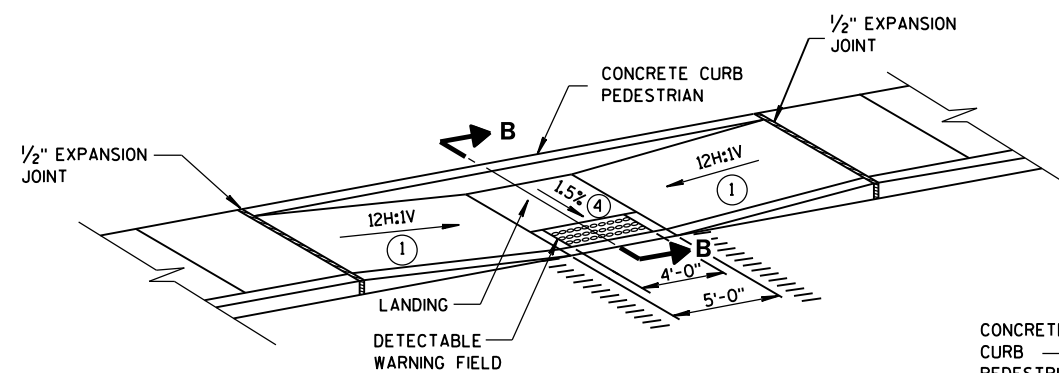
TYPE 6
DETECTABLE WARNING AT ISLANDS



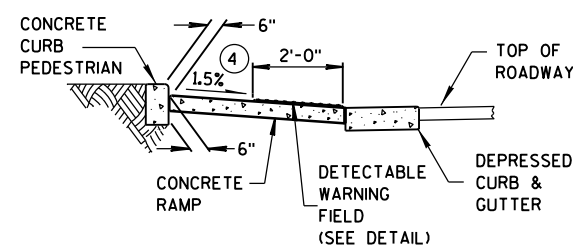
MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5



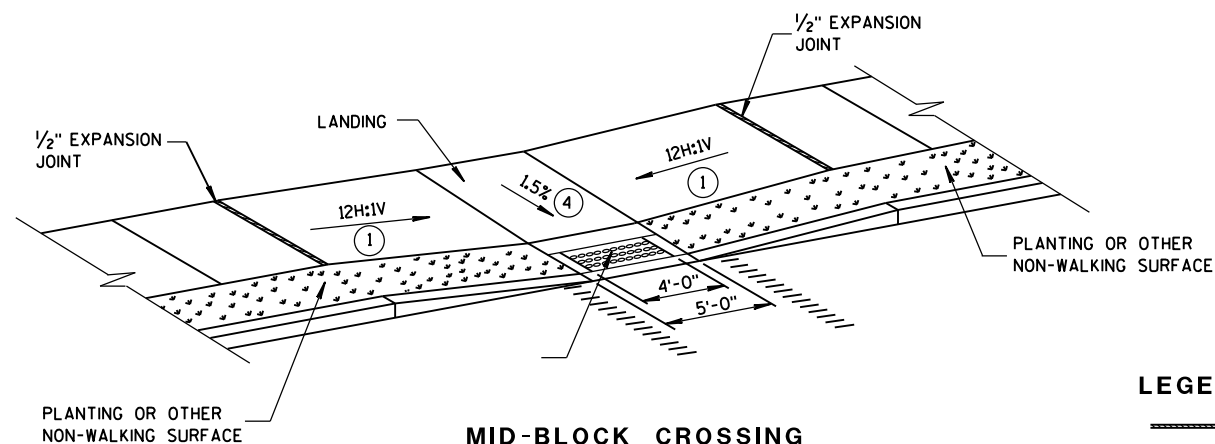
SECTION A-A



MID-BLOCK CROSSING
TYPE 7A



SECTION B-B



MID-BLOCK CROSSING
TYPE 7B

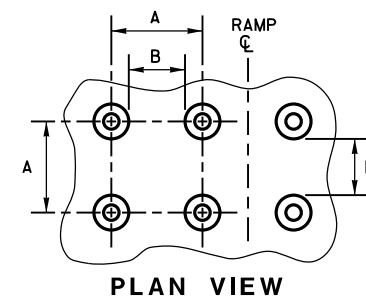
NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

GENERAL NOTES

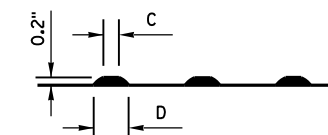
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

- ① SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ② THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET $\pm$ 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- ③ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.
- ④ $\pm$ 0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



PLAN VIEW



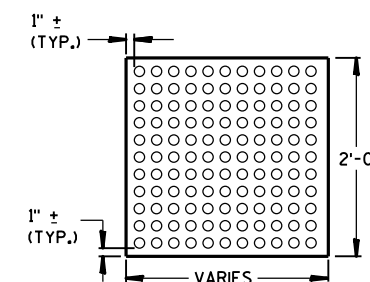
ELEVATION VIEW

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

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

TRUNCATED DOMES

DETECTABLE WARNING PATTERN DETAIL



PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)

LEGEND

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

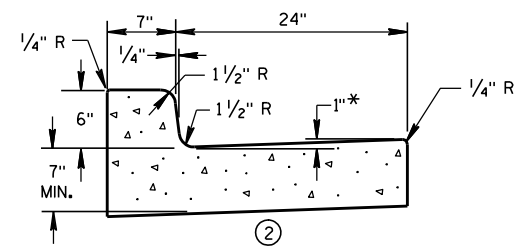
CURB RAMPS

TYPES 5, 6, 7A, 7B & 8

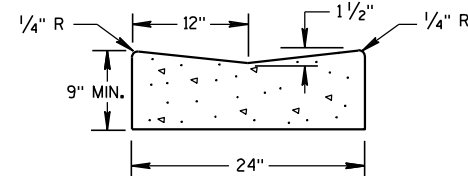
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2-6-2013
DATE
FHWA

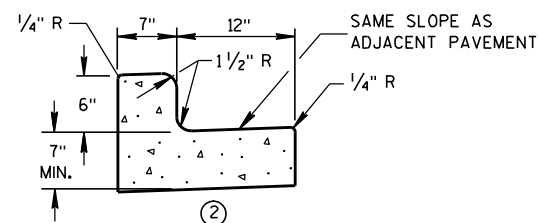
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



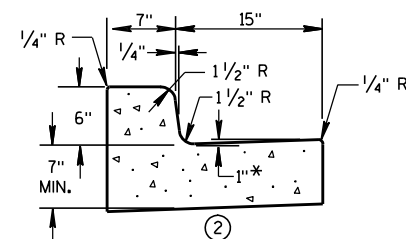
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

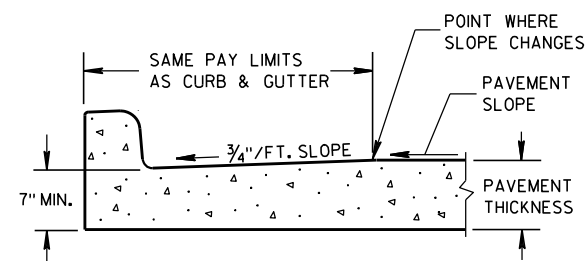


① CONCRETE CURB & GUTTER 19"

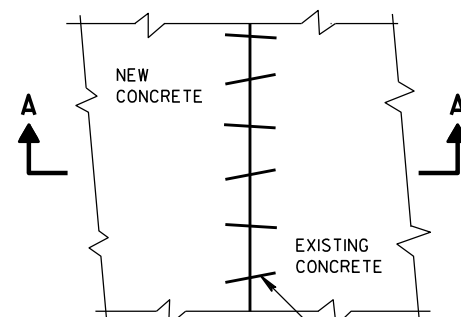


① CONCRETE CURB & GUTTER 22"

* TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



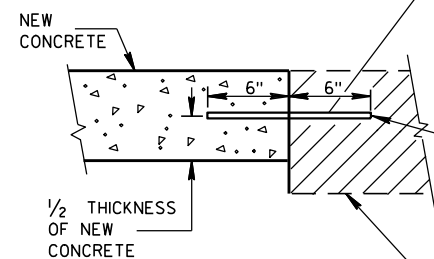
PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



PLAN VIEW

EXISTING AND NEW CONCRETE MAY BE CURB & GUTTER, SURFACE DRAIN, PAVEMENT OR OTHER CONCRETE STRUCTURE.

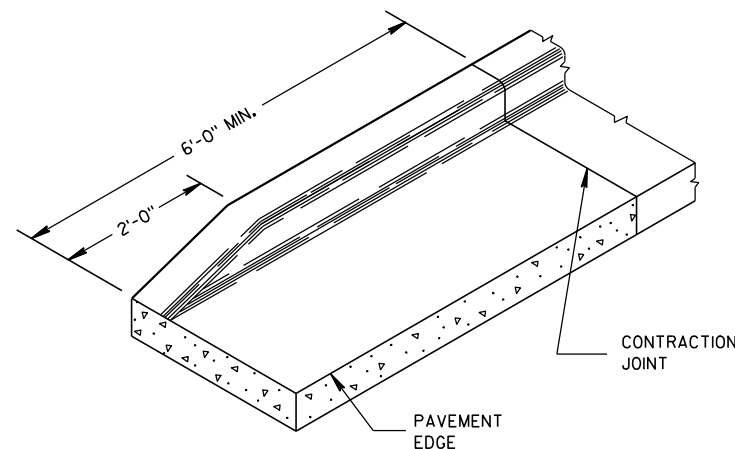
NO. 6 X 12" DEF. BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.



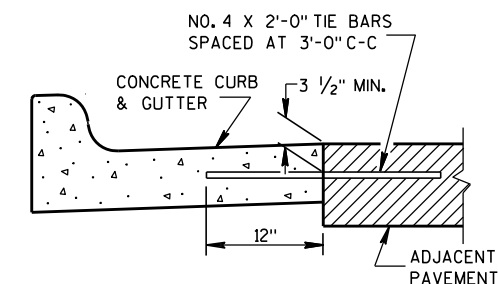
SECTION A-A
PAVEMENT TIES

THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.

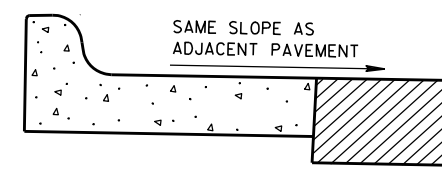
EXISTING CONCRETE



END SECTION CURB & GUTTER



① TYPICAL TIE BAR LOCATION



③ HIGH SIDE SECTION
(TYPICAL FOR ALL CURB & GUTTER)

GENERAL NOTES

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

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

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURB.

- ① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUIRED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.

CONCRETE GUTTER, CURB AND
GUTTER AND PAVEMENT TIES
(For Optional Use in Milwaukee Co. Only)

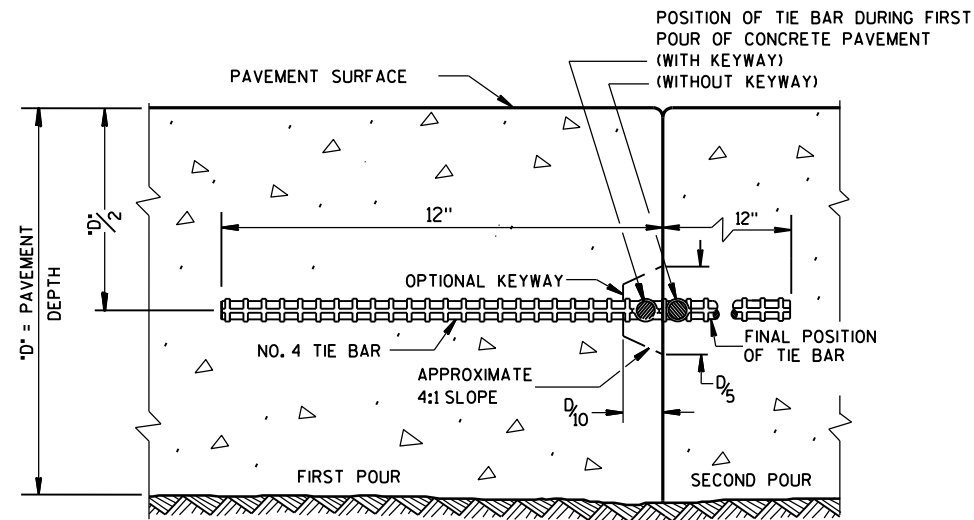
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

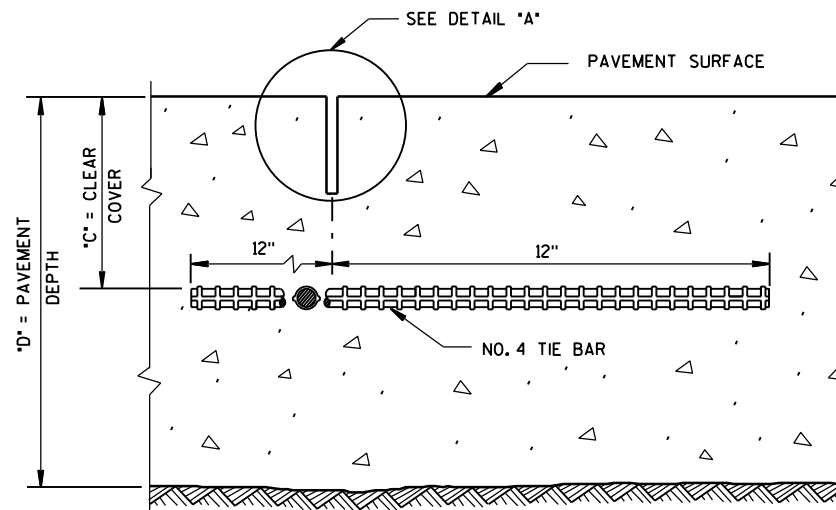
11/22/2010
DATE

FHWA

/S/ Jerry Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



CONSTRUCTION JOINT



SAWED JOINT

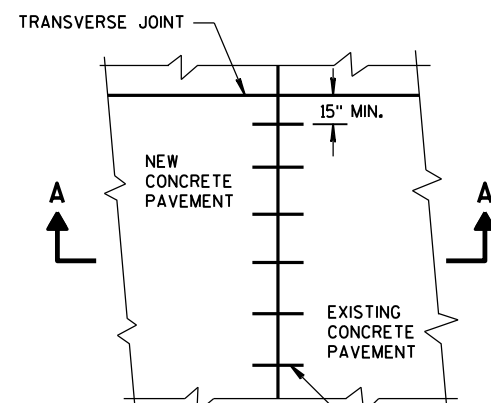
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

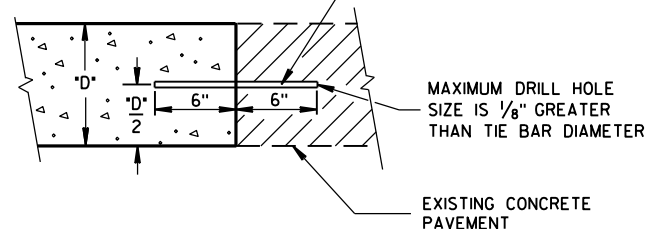
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

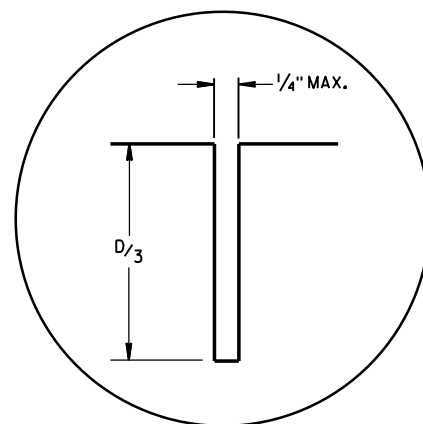


PLAN VIEW

NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



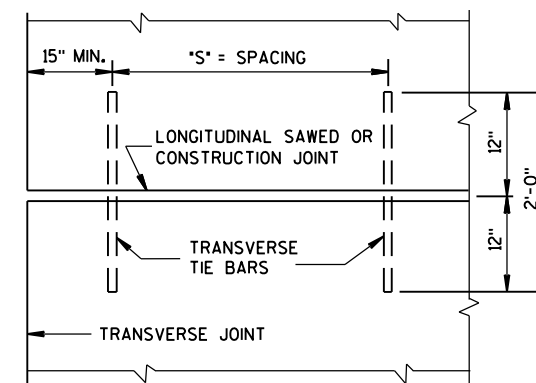
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"

TIE BAR TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH 24' OR 26'	≥ 30'
6, 6 1/2"	3" ± 1/2"	48"	42"
7, 7 1/2"	3 1/4" ± 1"	45"	36"
8, 8 1/2"	3 3/4" ± 1"	39"	30"
9, 9 1/2"	4 1/4" ± 1"	33"	27"
10, 10 1/2"	4 3/4" ± 1"	30"	24"
11, 11 1/2"	5 1/4" ± 1"	27"	21"
12"	5 3/4" ± 1"	24"	21"



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

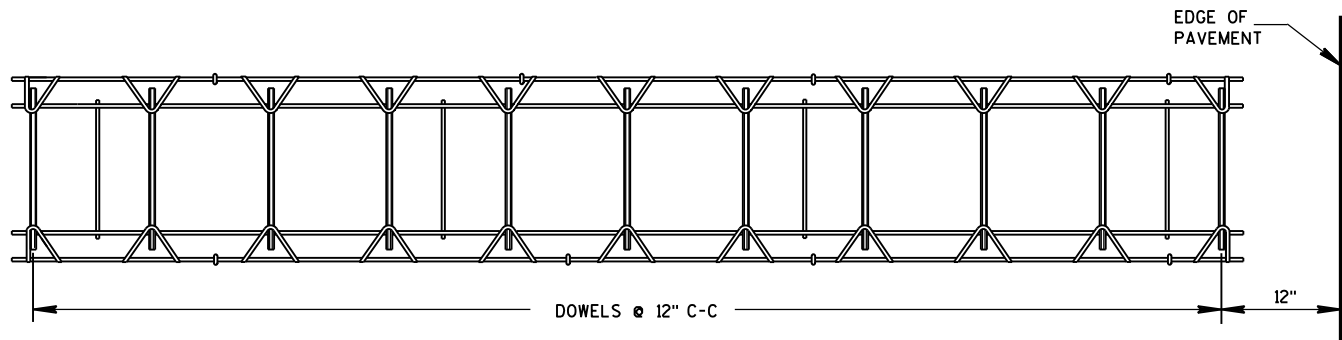
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

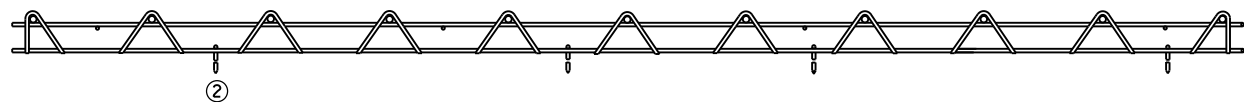
5-3-2013
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DESIGN ENGINEER

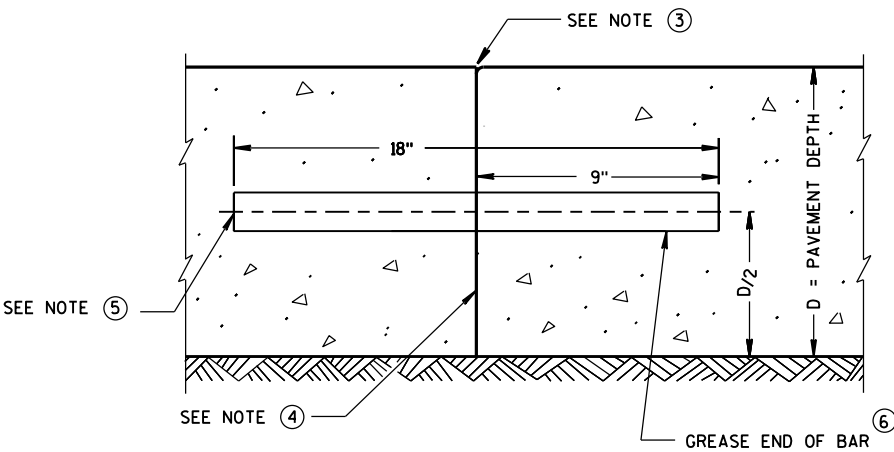
FHWA



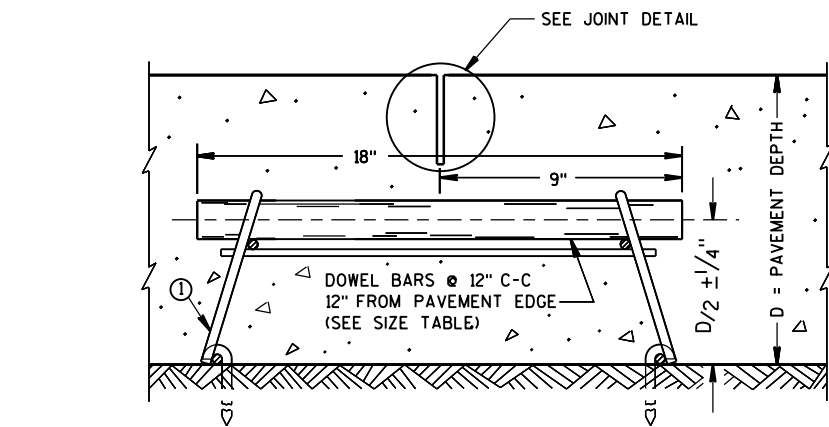
PLAN VIEW



SIDE VIEW
CONTRACTION JOINT DOWEL ASSEMBLY ①



TRANSVERSE CONSTRUCTION JOINT



DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE
AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

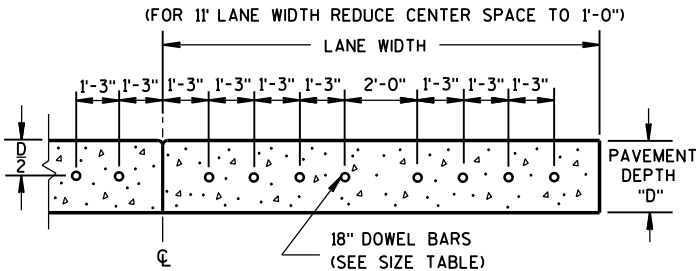
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE LONGITUDINAL JOINT AND THE FREE EDGE OF PAVEMENT.

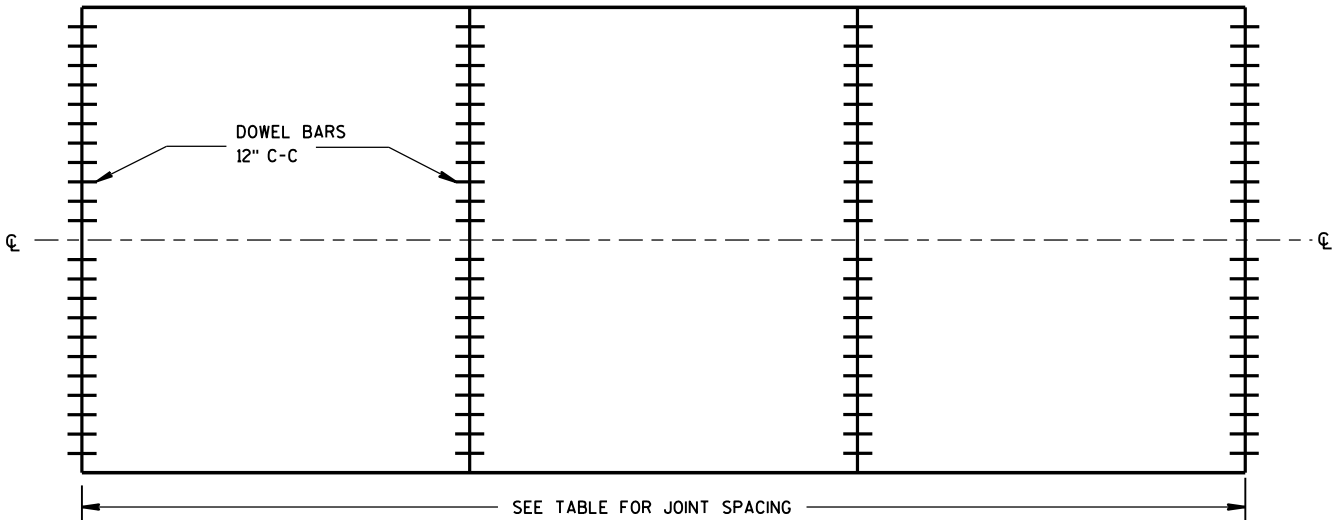
CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

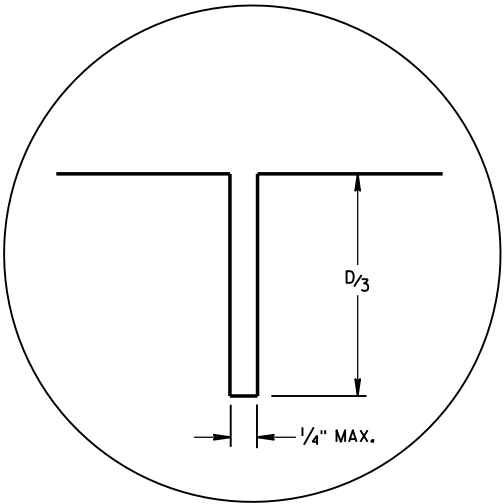
- ① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.
- ② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
- ③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.
- ④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.
- ⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.
- ⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
- ⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



CONTRACTION JOINT LOCATIONS

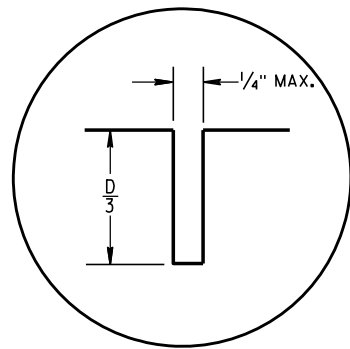


JOINT DETAIL

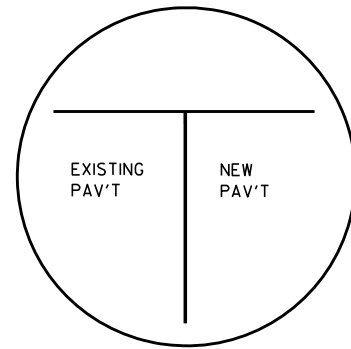
URBAN DOWELED
CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/3/2013 /S/ Deb Bischoff
DATE PAVEMENT POLICY & DESIGN ENGINEER
FHWA

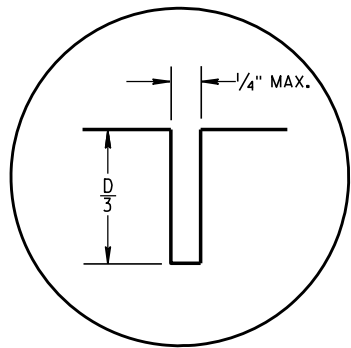


C1

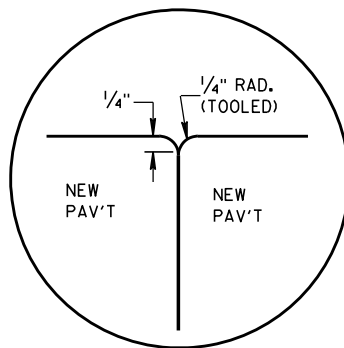


C2

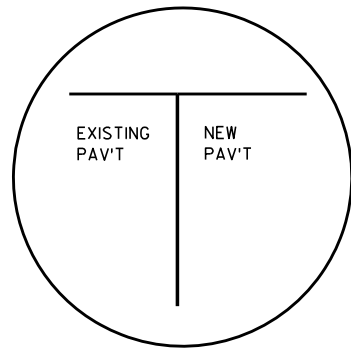
TRANSVERSE JOINTS



L1

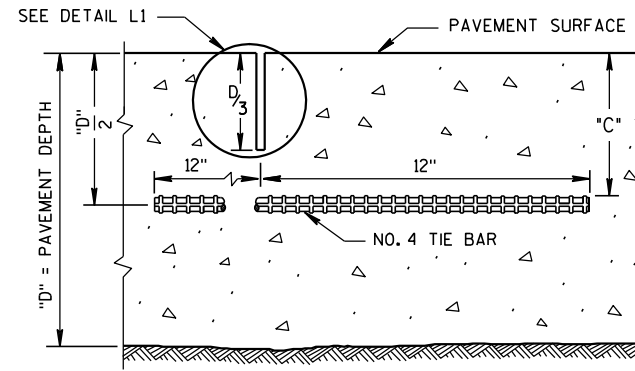


L2

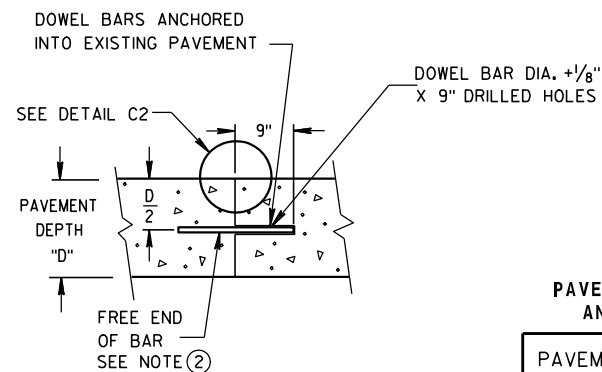


L3

LONGITUDINAL JOINTS



SECTION C-C
SAWED JOINT



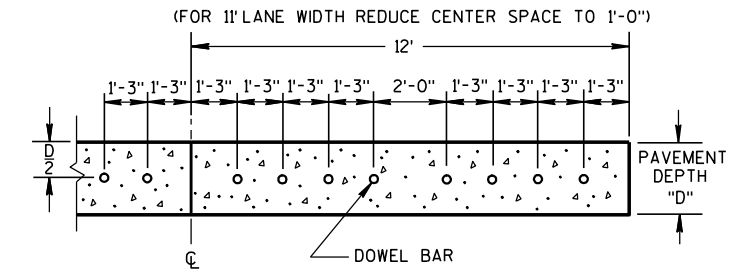
SECTION D-D

GENERAL NOTES

ANCHOR TIE BARS AND DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 24 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

- ① INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.
- ② APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



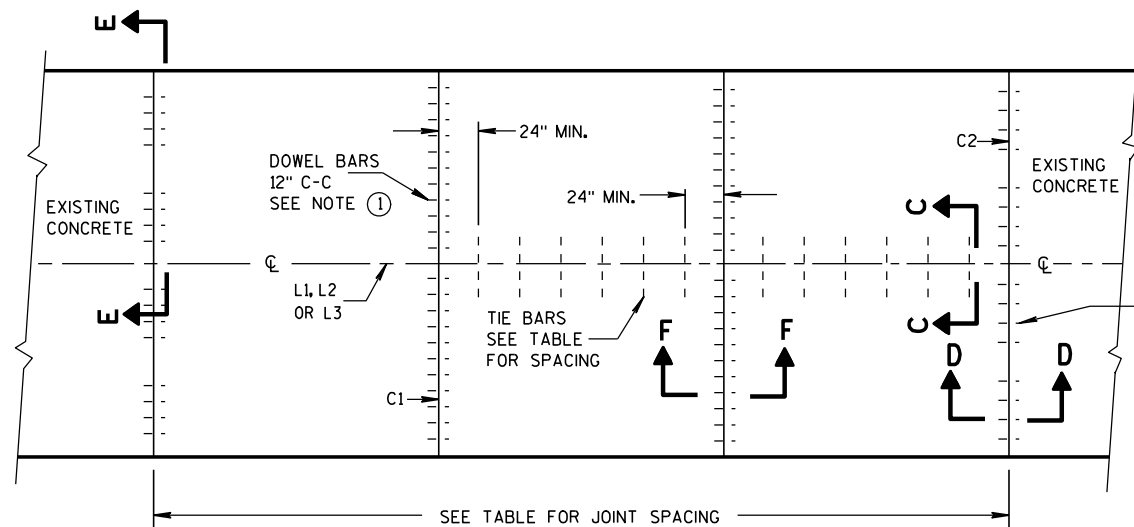
SECTION E-E
SPACING OF DOWEL BARS
ANCHORED INTO EXISTING PAVEMENT

PAVEMENT DEPTH, DOWEL BAR SIZE
AND JOINT SPACING TABLE

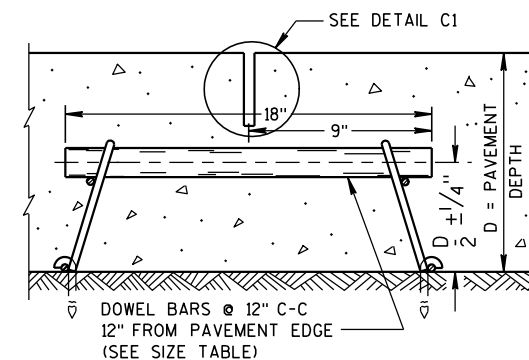
PAVEMENT DEPTH "D"	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6, 6 1/2"	NONE	12'
7, 7 1/2"	1"	14'
8, 8 1/2"	1 1/4"	15'
9, 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

TIE BAR LOCATION TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING C-C	
		PAVEMENT WIDTH 24' OR 26'	≥ 30'
6, 6 1/2"	3" ± 1/2"	48"	42"
7, 7 1/2"	3 1/4" ± 1"	45"	36"
8, 8 1/2"	3 3/4" ± 1"	39"	30"
9, 9 1/2"	4 1/4" ± 1"	33"	27"
10, 10 1/2"	4 3/4" ± 1"	30"	24"
11, 11 1/2"	5 1/4" ± 1"	27"	21"
12"	5 3/4" ± 1"	24"	21"



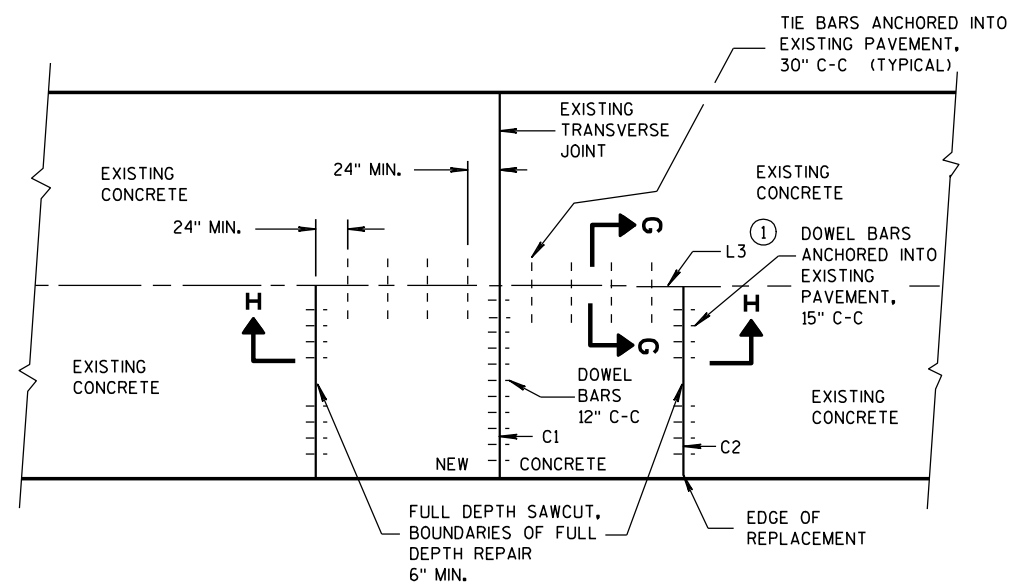
PLAN VIEW
CONCRETE BASE
CONTRACTION JOINT LOCATIONS



SECTION F-F
CONTRACTION JOINT

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

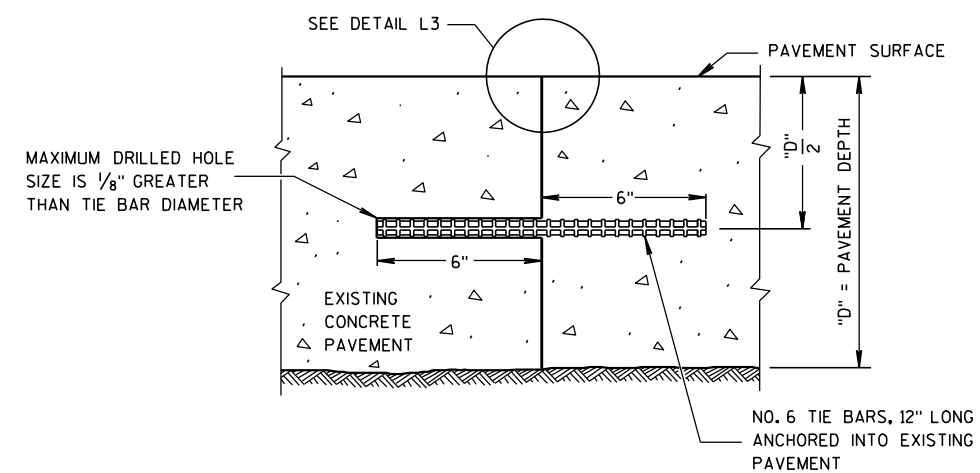


PLAN VIEW

SINGLE LANE CONCRETE BASE REPAIR

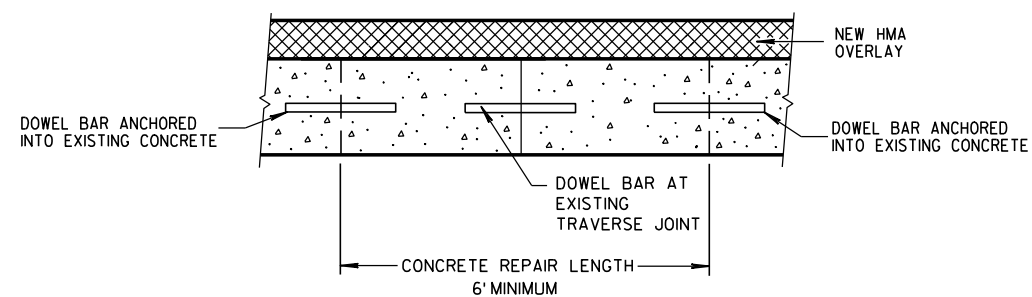
GENERAL NOTES

- ① USE AN ENGINEER-APPROVED BOND BREAKER AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.



SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



SECTION H-H

CONCRETE BASE

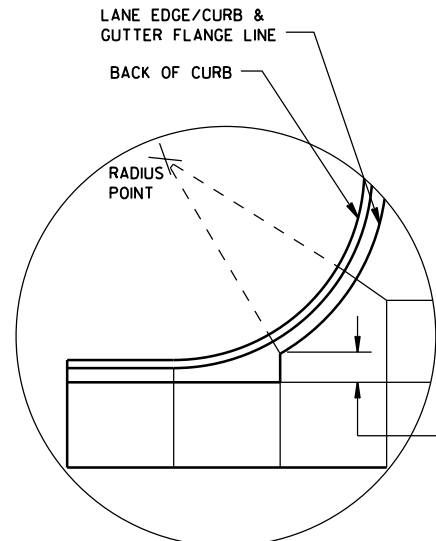
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

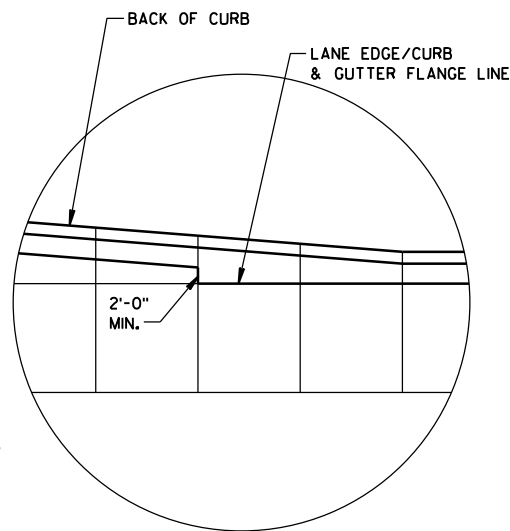
12-11-2009
DATE

FHWA

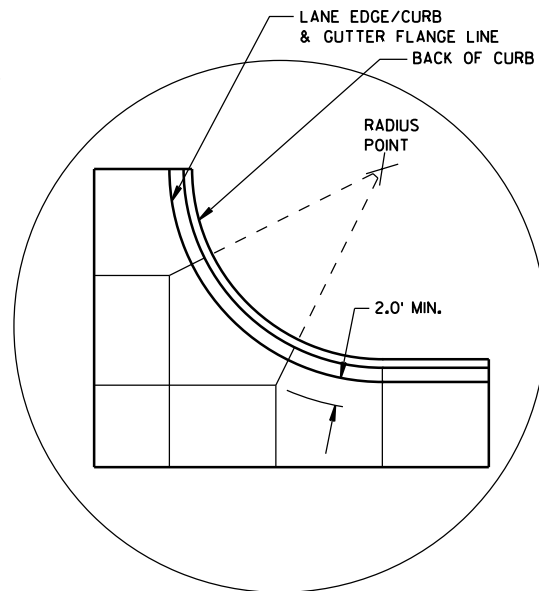
/S/ Deb Bischoff
PAVEMENT POLICY & DESIGN ENGINEER



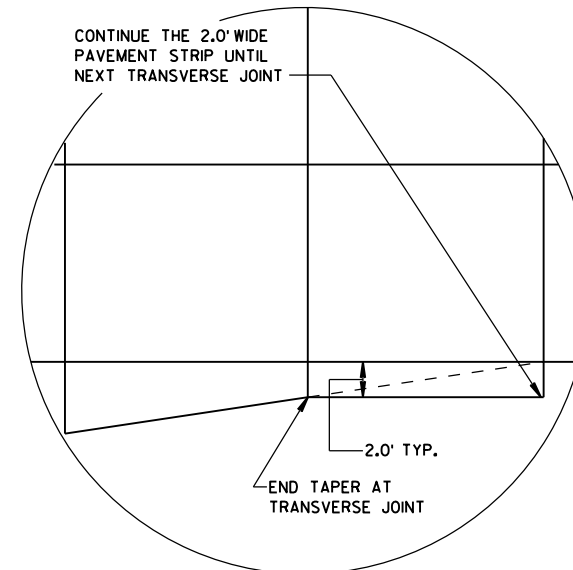
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

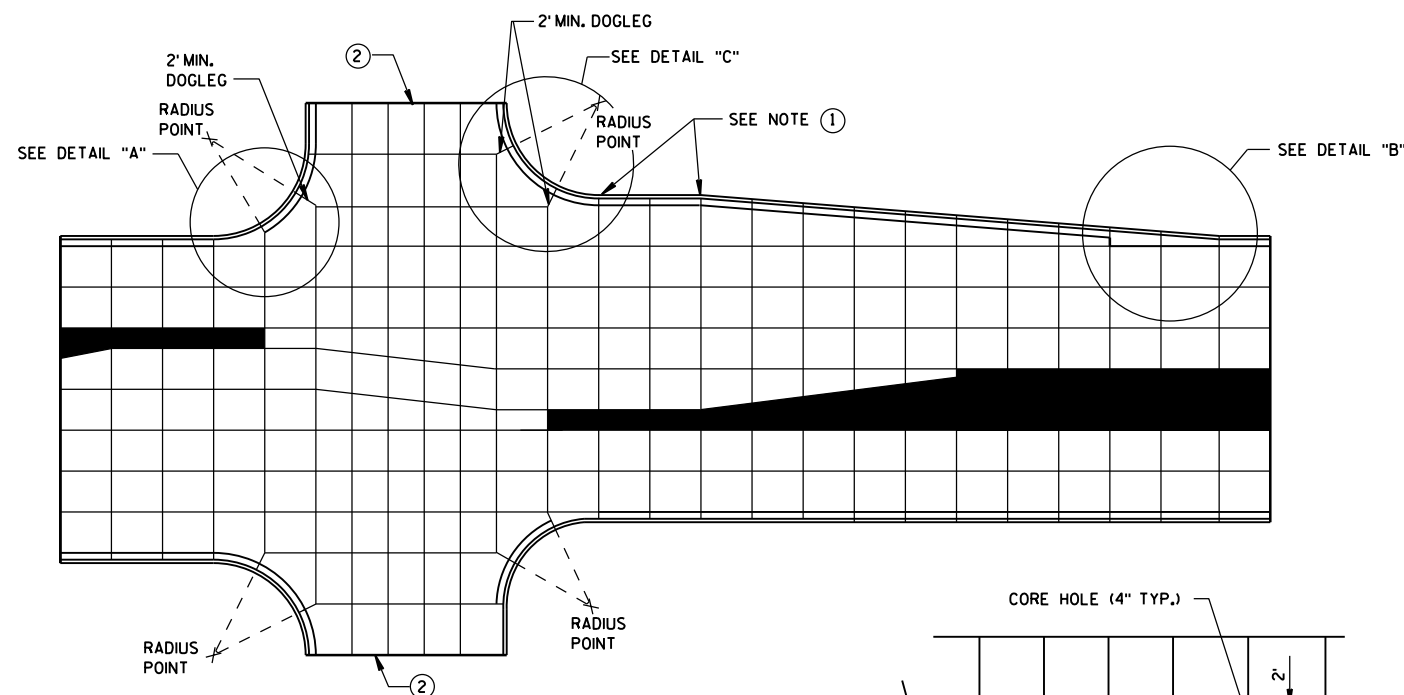
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

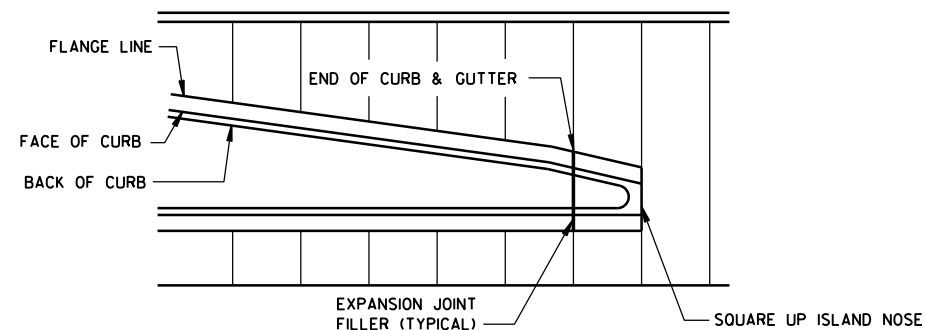
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

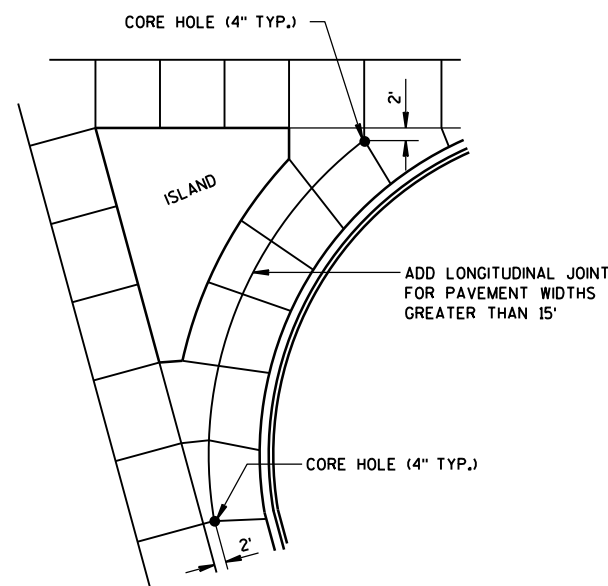
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



STANDARD INTERSECTION



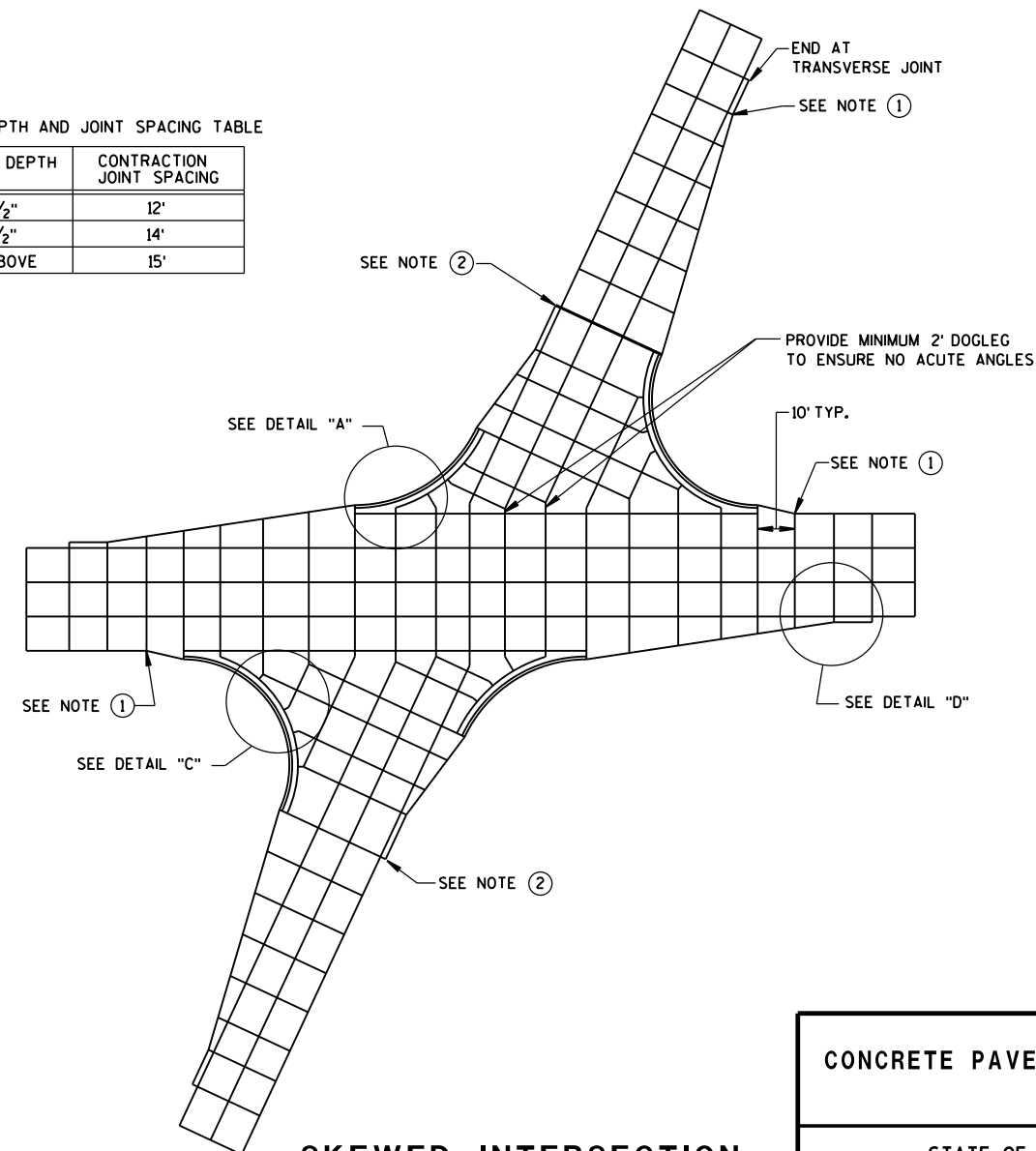
APPROACH TO MEDIAN



LARGE RIGHT TURN

PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



SKewed INTERSECTION

CONCRETE PAVEMENT JOINTING

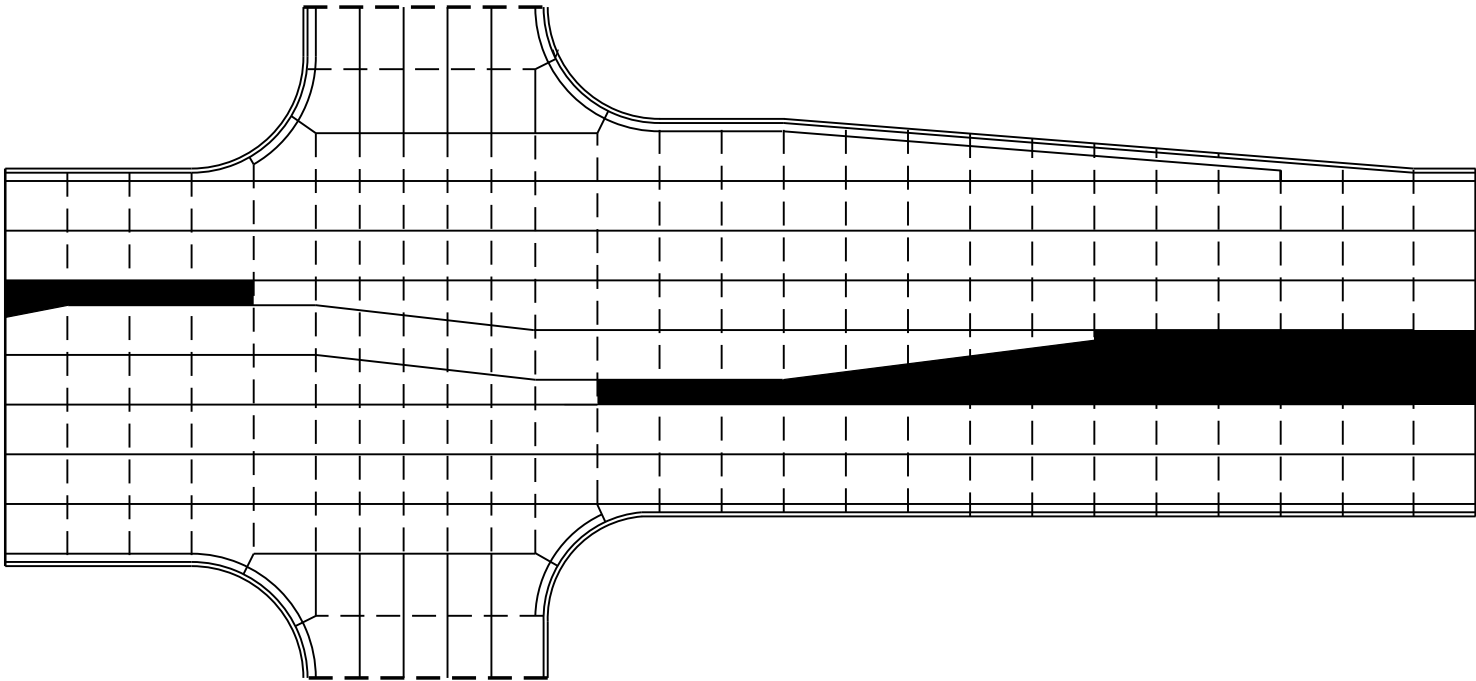
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

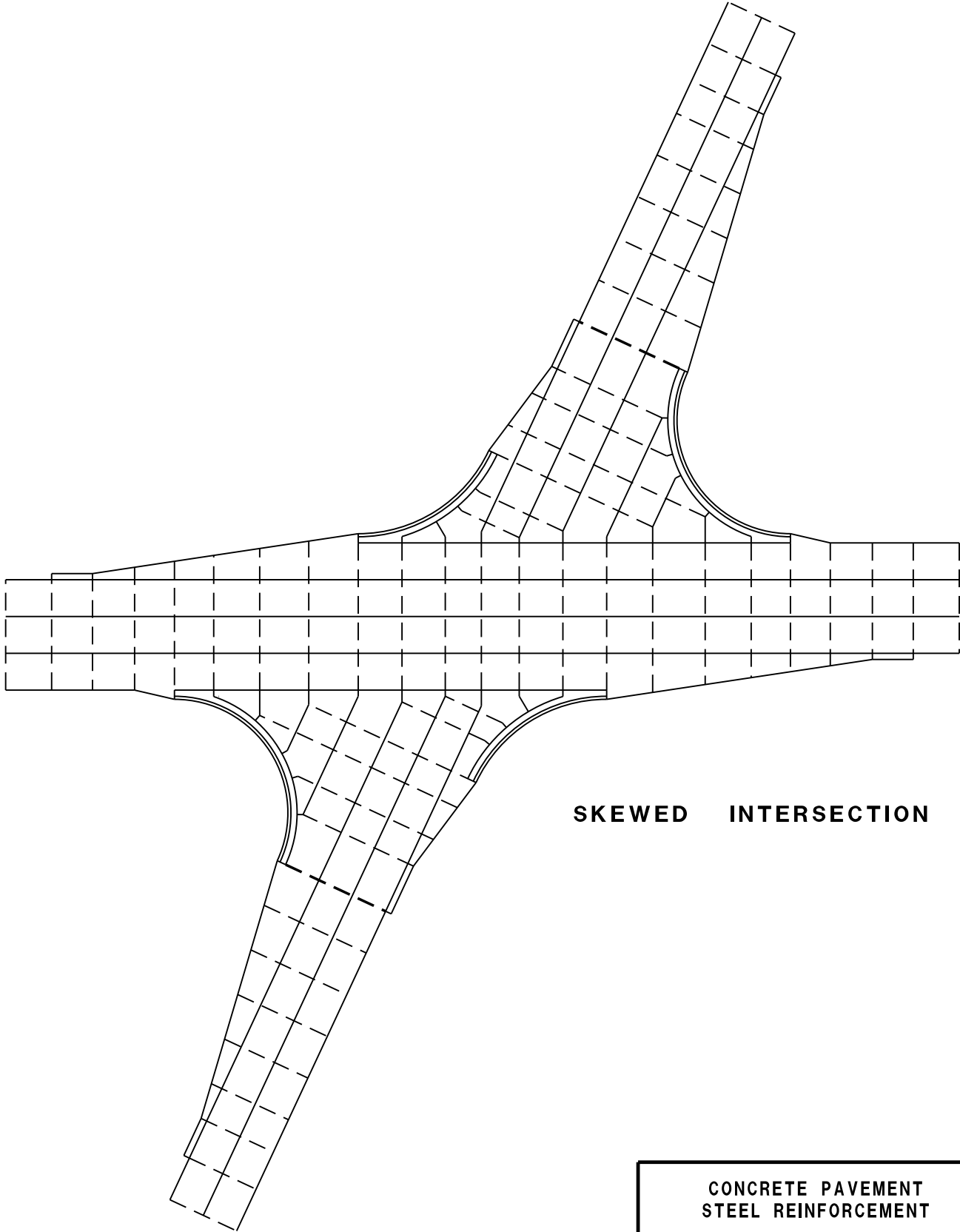
- POTENTIAL DOWELED EXPANSION JOINT
- DOWELED JOINT
- TIED JOINT

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



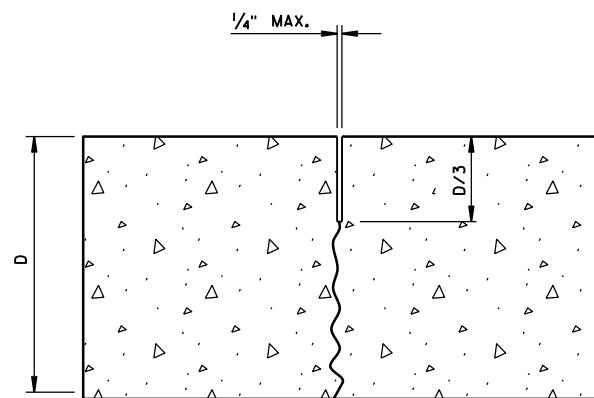
STANDARD INTERSECTION



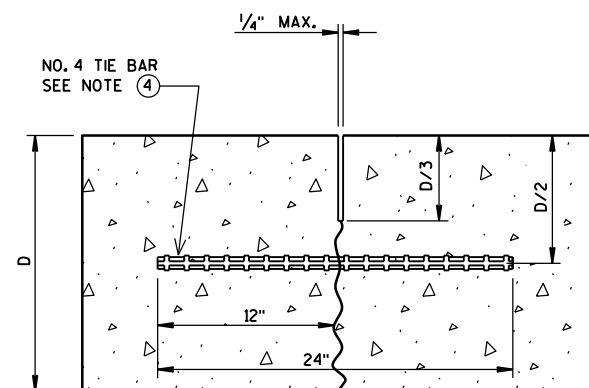
SKewed INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

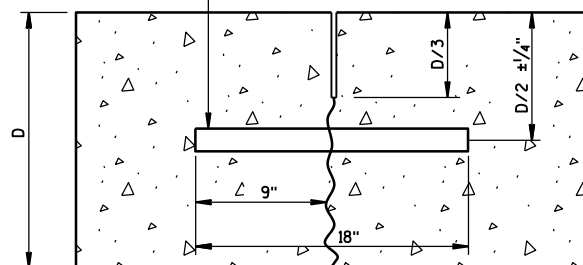


UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

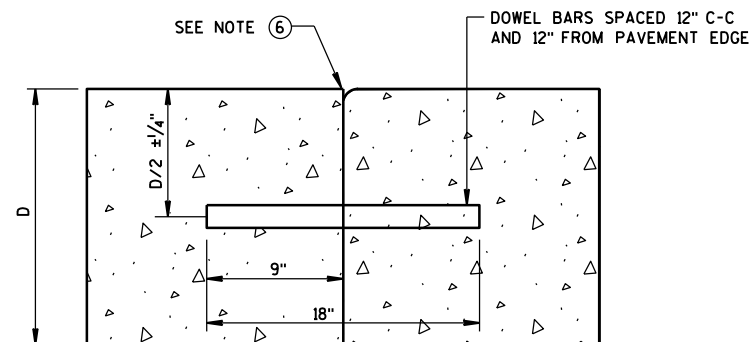
DOWEL BARS AT 12" C-C
12" FROM PAVEMENT EDGE



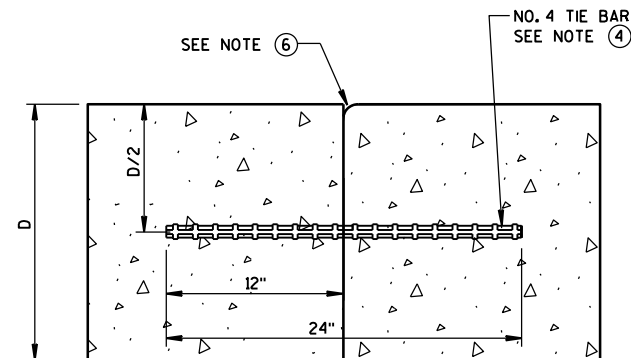
DOWELED-TRANSVERSE

CONTRACTION JOINTS

SEE NOTE ②

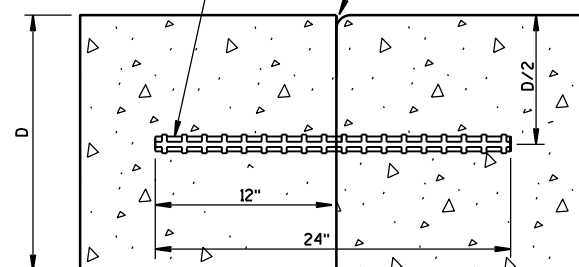
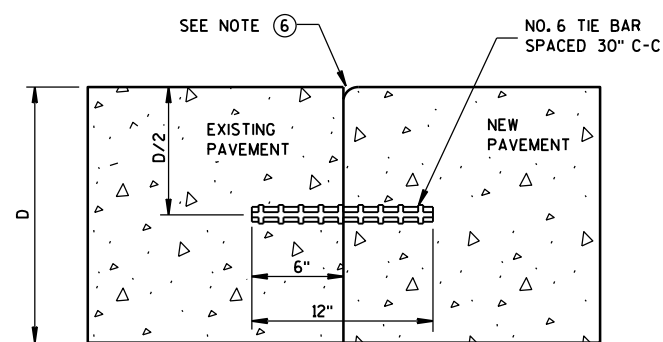


DOWELED TRANSVERSE



TIED LONGITUDINAL

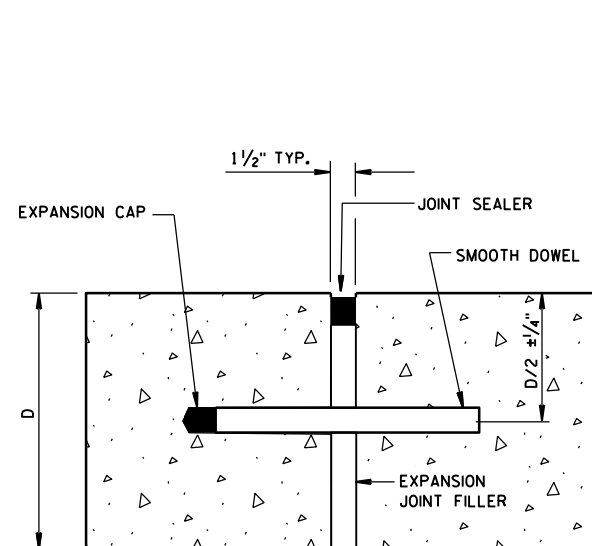
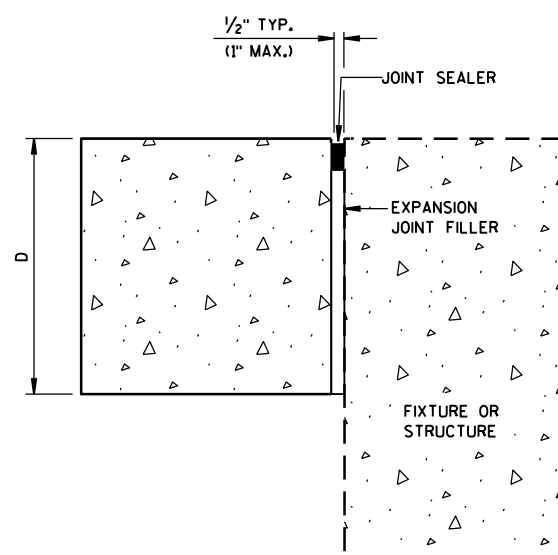
NO. 6 TIE BARS SPACED 12" C-C
AND 12" FROM PAVEMENT EDGE

TIED TRANSVERSE
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)

TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS

SEE NOTE ⑤

DOWELED-TRANSVERSE
SEE NOTE ①

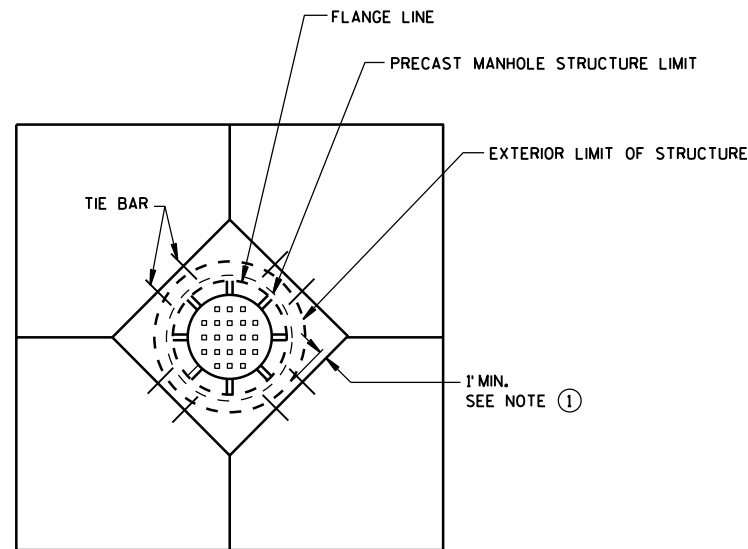
UNTIED-LONGITUDINAL

EXPANSION JOINTS

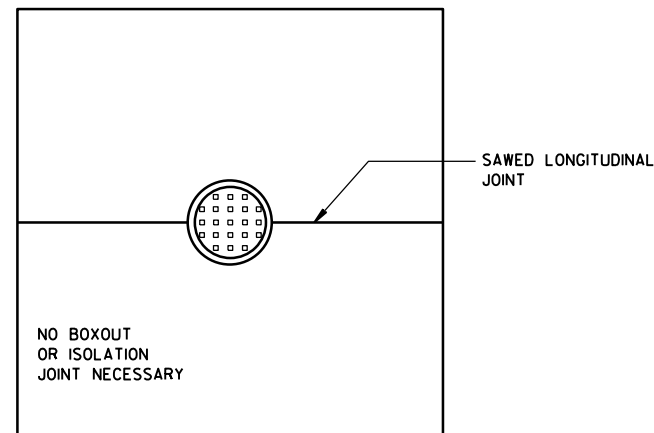
GENERAL NOTES

1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. SPACE TIE BARS AT LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C1.
5. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
6. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.

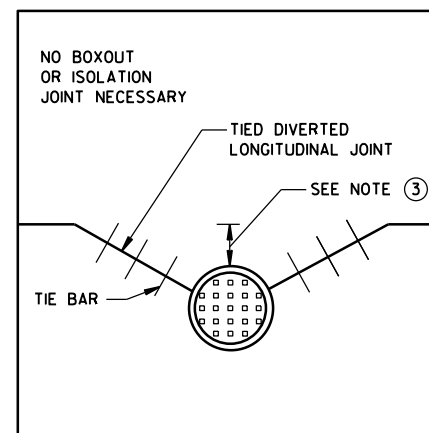
CONCRETE PAVEMENT
JOINT TYPESSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



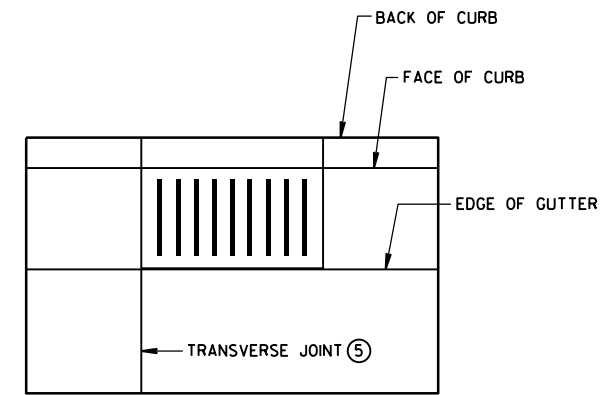
**DIAGONAL MANHOLE BOXOUT
FOR CONSTRUCTION JOINTS**



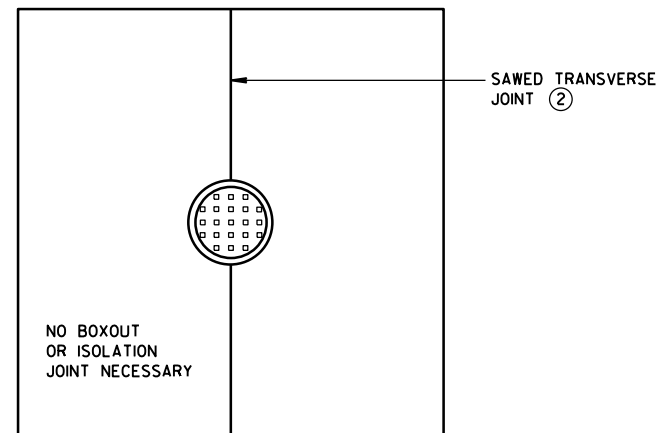
**MANHOLE WITH
LONGITUDINAL JOINT**



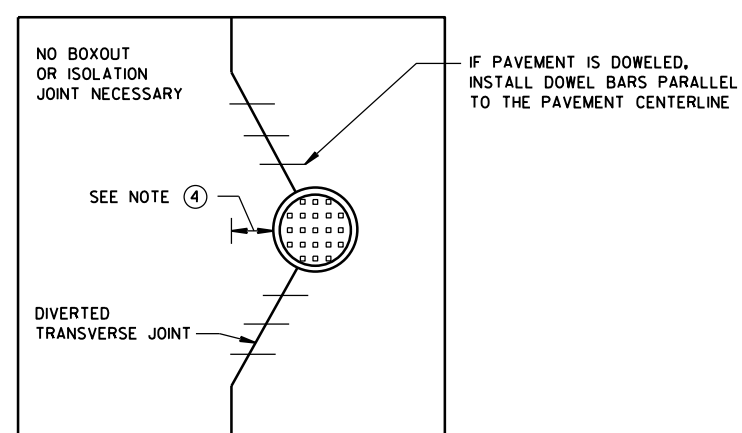
**MANHOLE WITH DIVERTED
LONGITUDINAL CONTRACTION JOINT**



**INLET WITH
TRANSVERSE JOINT**



**MANHOLE WITH
TRANSVERSE JOINT**



**MANHOLE WITH DIVERTED
TRANSVERSE CONTRACTION JOINT**

GENERAL NOTES

- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- ④ IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- ⑤ ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

**CONCRETE PAVEMENT
JOINTING AT UTILITY FIXTURES**

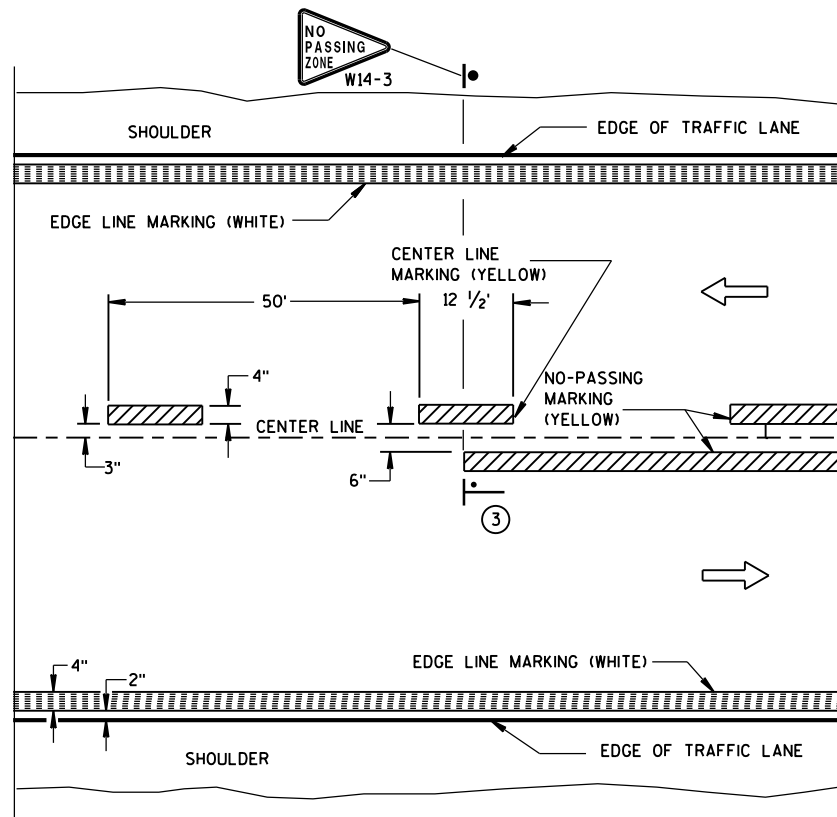
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

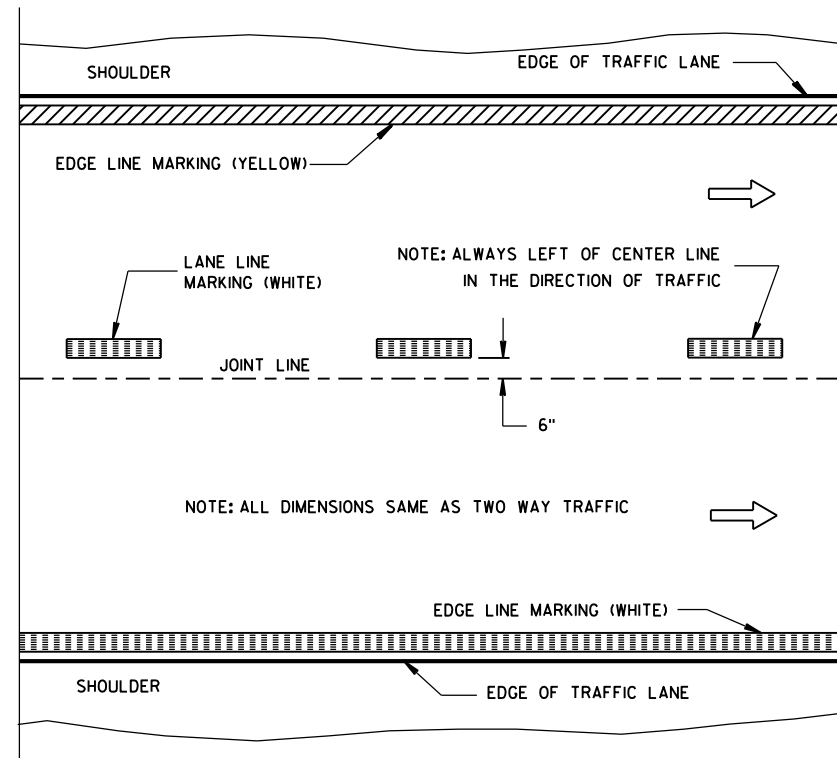
5-3-2013
DATE

FHWA

/S/ Deb Bischoff
PAVEMENT POLICY & DESIGN ENGINEER

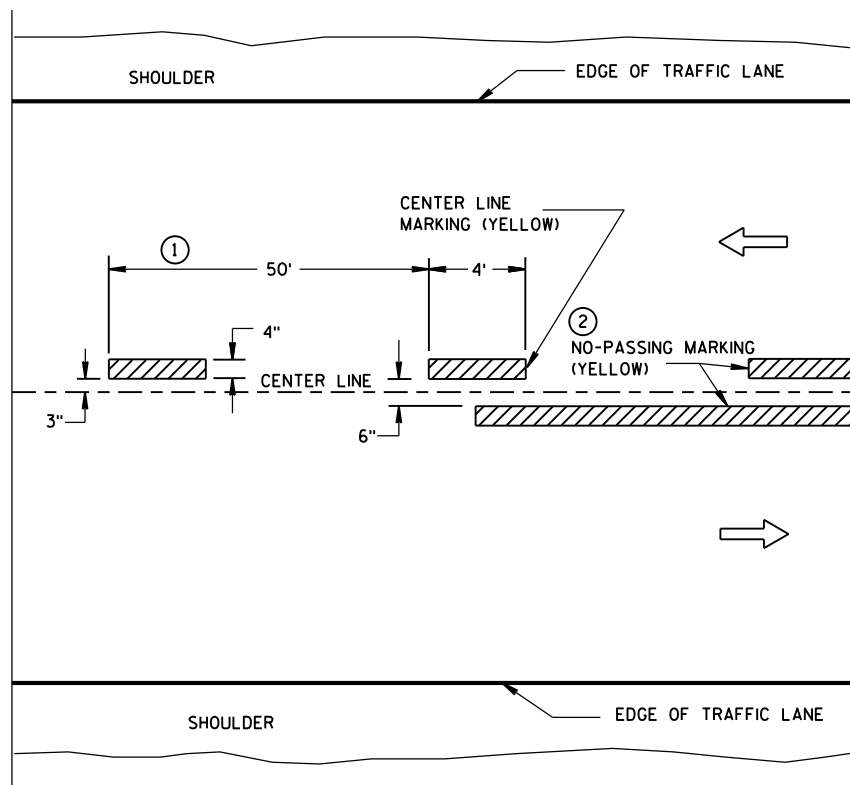


TWO WAY TRAFFIC

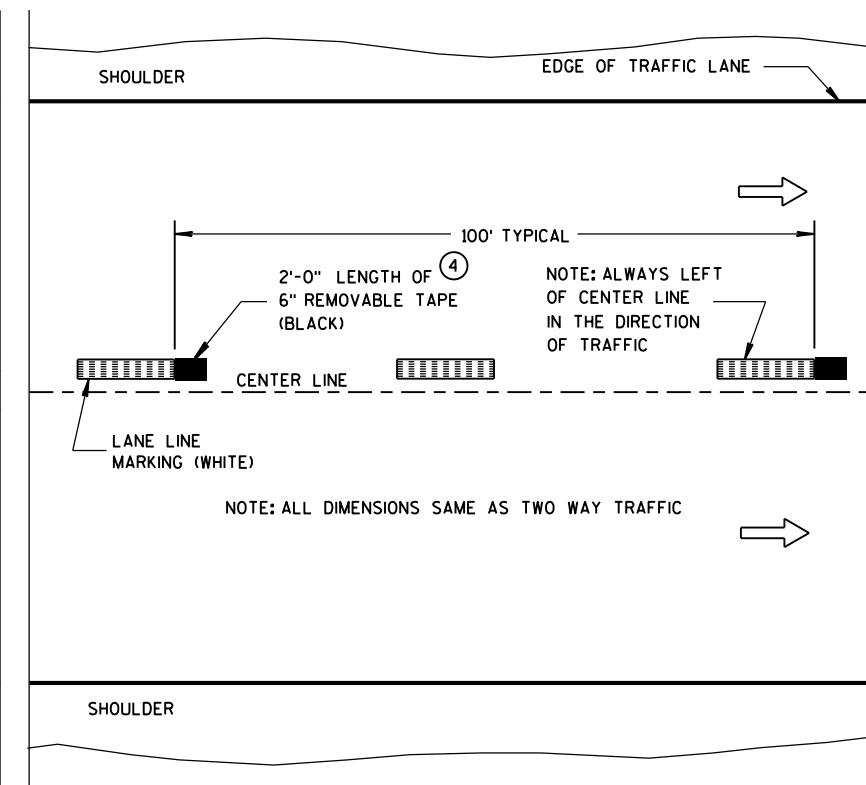


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

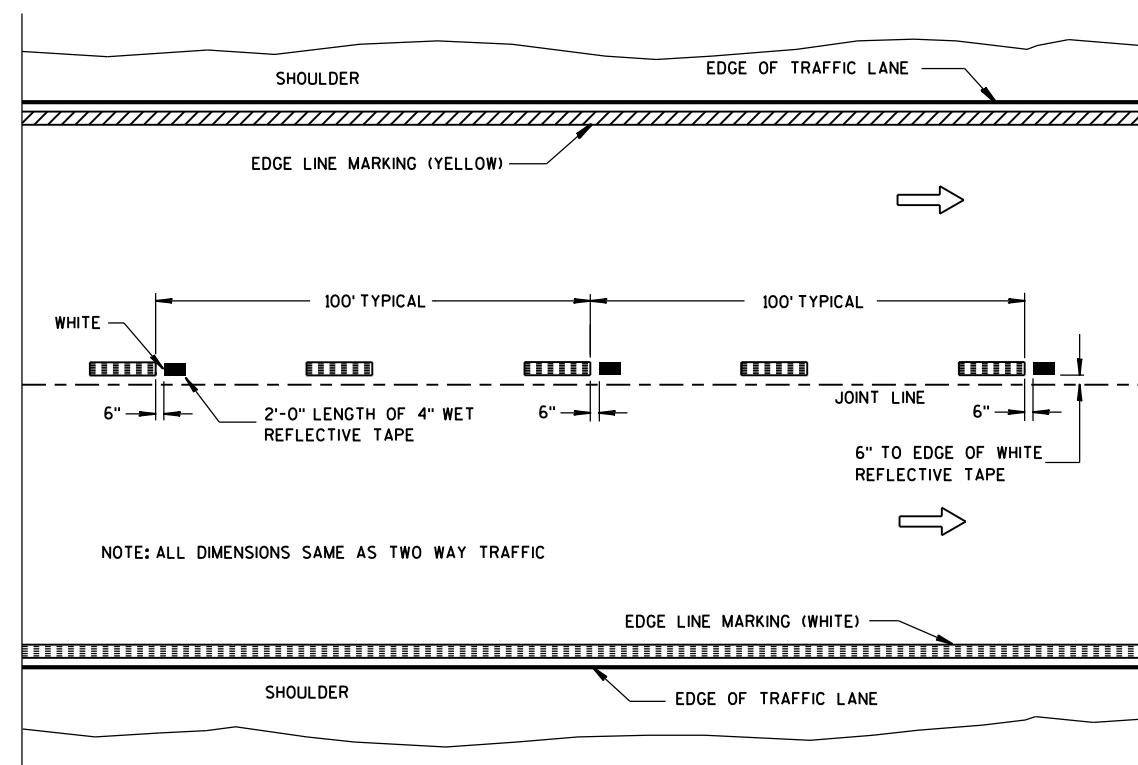
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- ① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- ③ NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- ④ CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

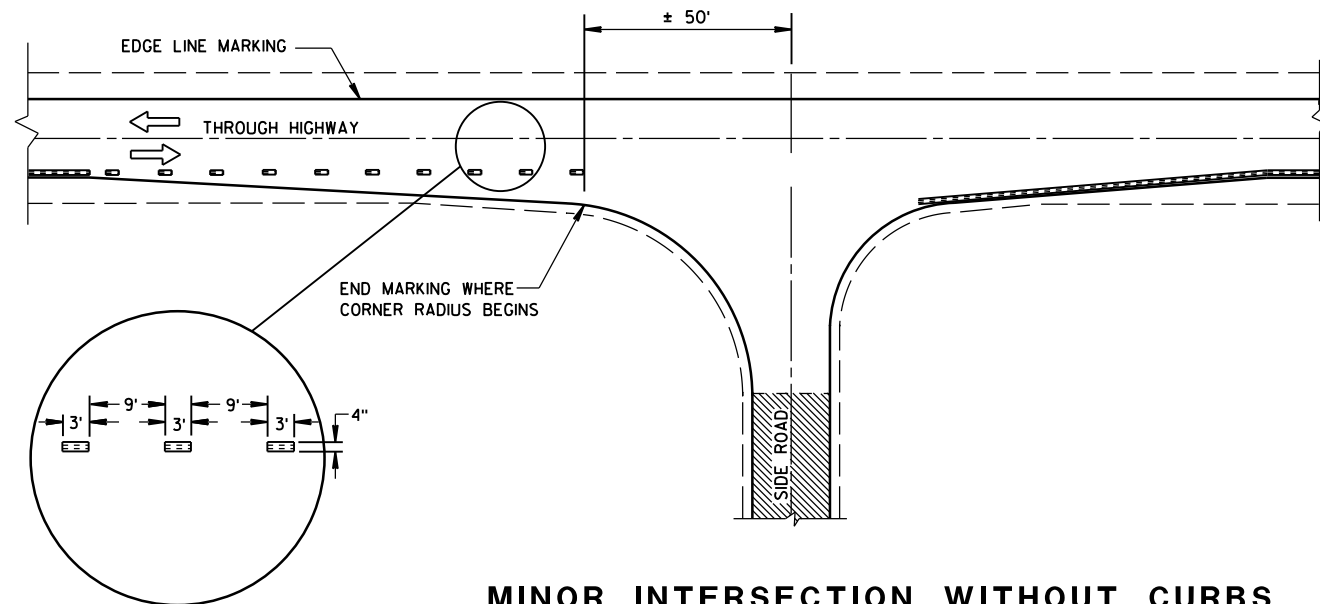
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

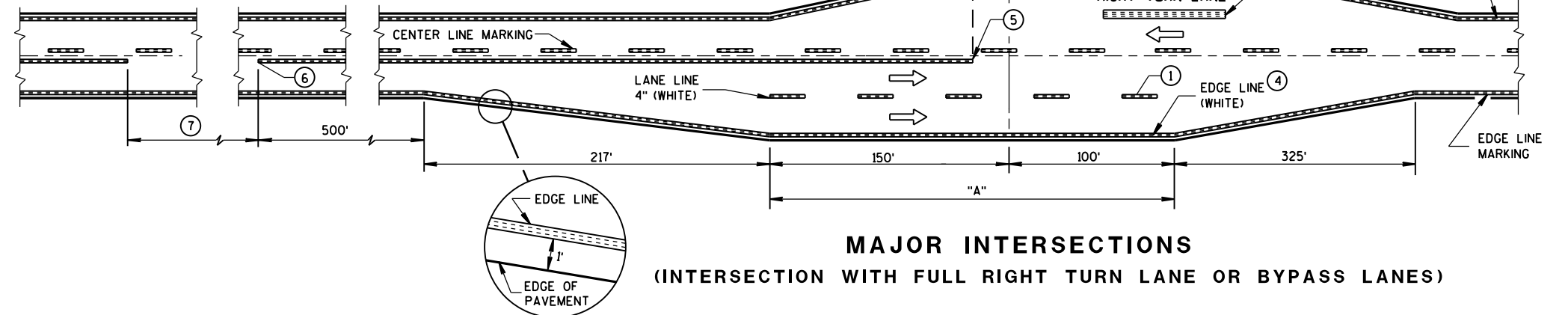
APPROVED
10-1-2012 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



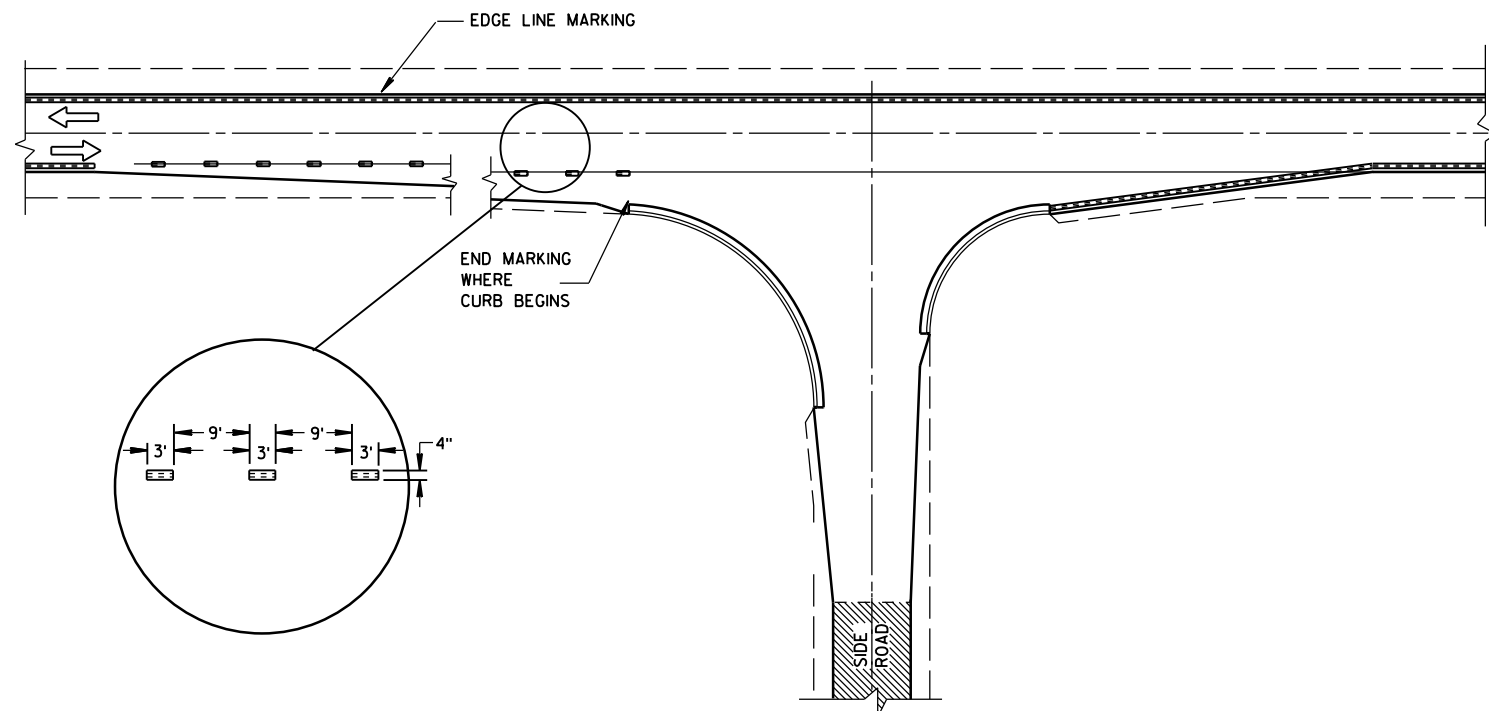
MINOR INTERSECTION WITHOUT CURBS

⑦

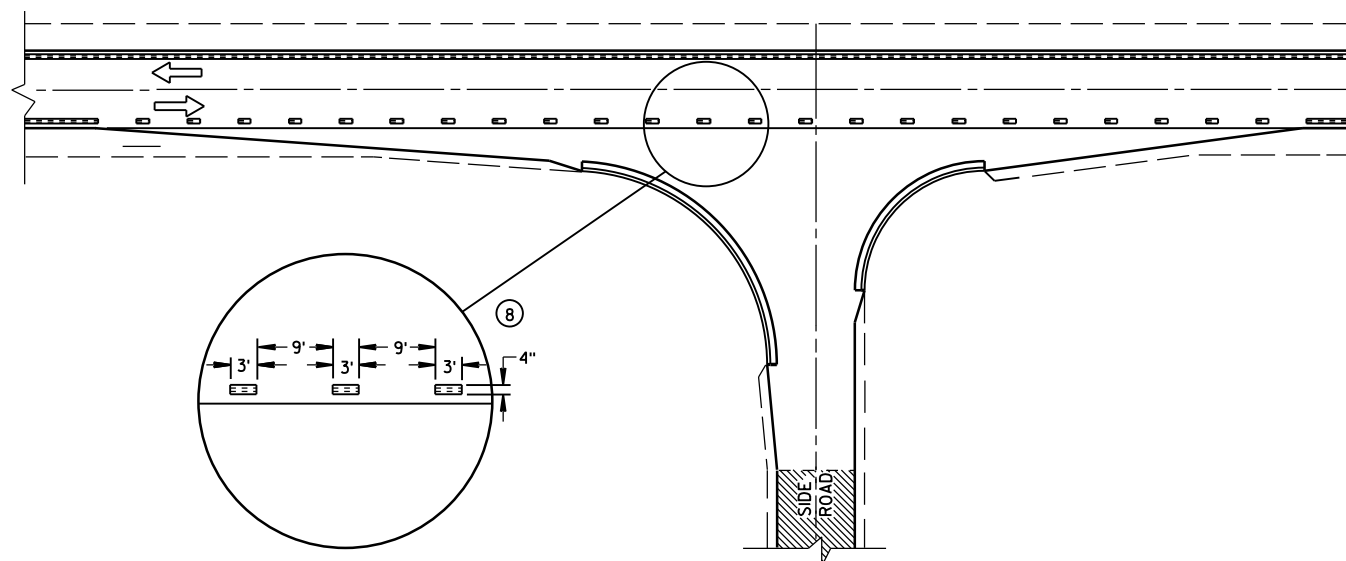
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS
③ (FOR SPECIAL CONDITIONS AS SPECIFIED)

GENERAL NOTES

- EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
 - ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
 - ③ ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
 - ④ THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.
 - ⑤ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
 - ⑥ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
 - ⑦ IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
 - ⑧ 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



- 6

URBAN BICYCLE LANE MARKING

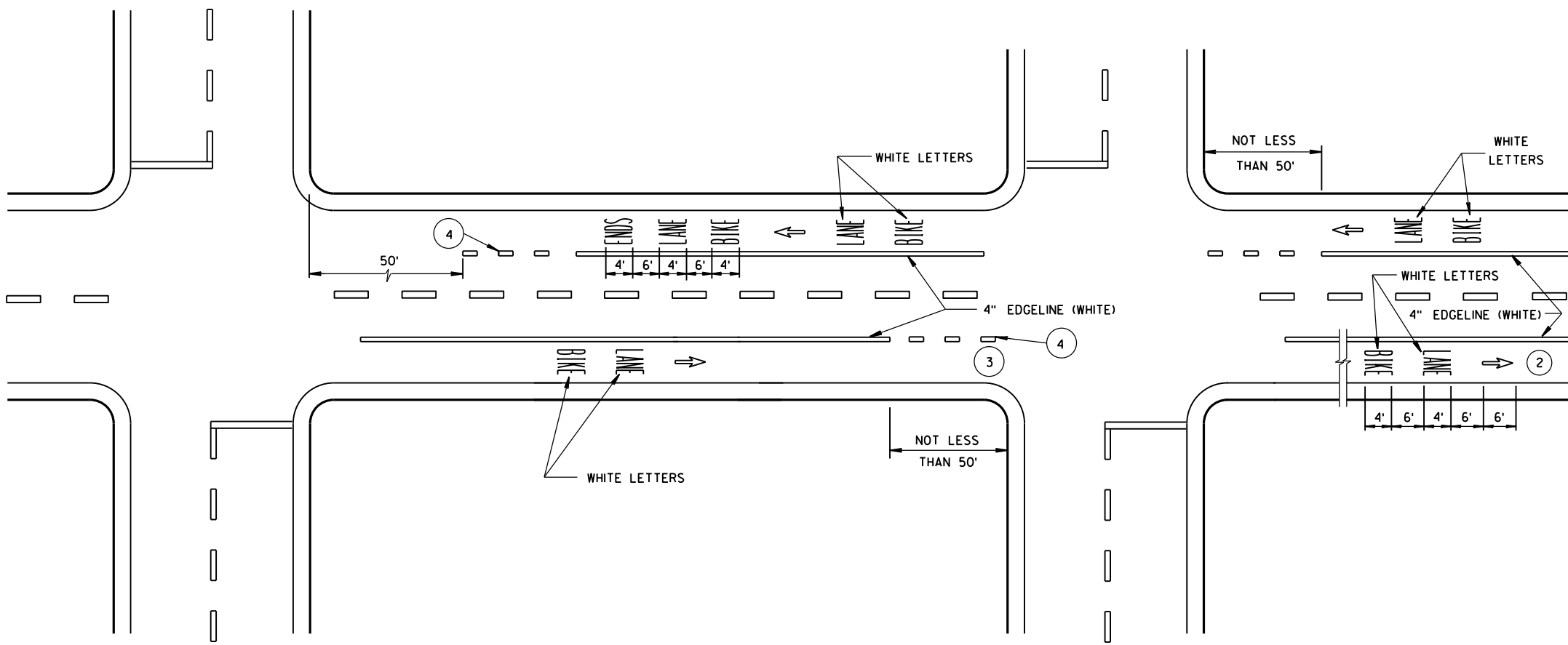
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

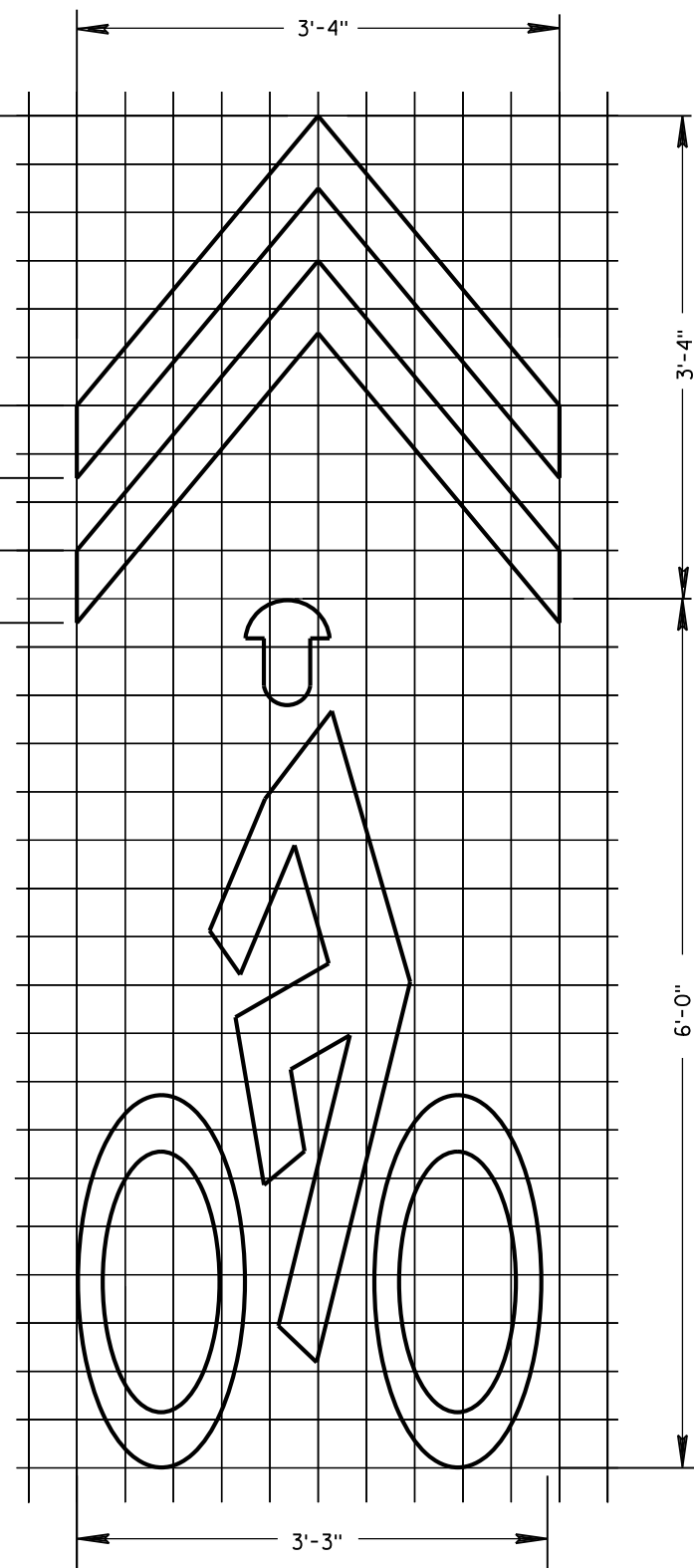


GENERAL NOTES

- 1 DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
- 2 THE SERIES OF PAVEMENT MARKING SYMBOLS SHALL BE REPEATED AFTER INTERSECTIONS AND SPACED A MAXIMUM OF 250'. NO PAVEMENT MARKING WILL TAKE PLACE IN THE CROSSWALK.
- 3 DOTTED LINES SHOULD BE USED 50' TO 200' IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
- 4 3' LINE, 9' GAP - 4" WIDE, WHITE.

DESIGNATED BICYCLE LANE
NO PARKING

URBAN BICYCLE LANE MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4/30/2013 DATE	/S/ Travis Fettes STATE TRAFFIC ENGINEER
FHWA	

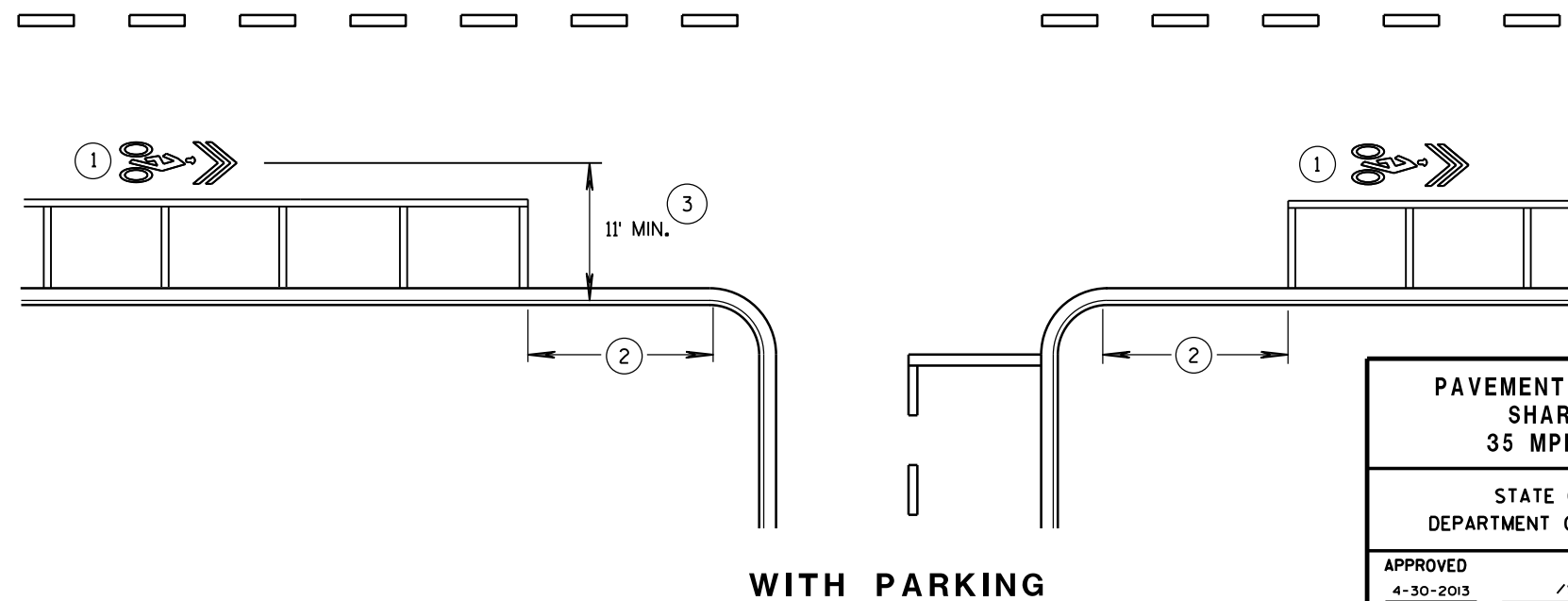
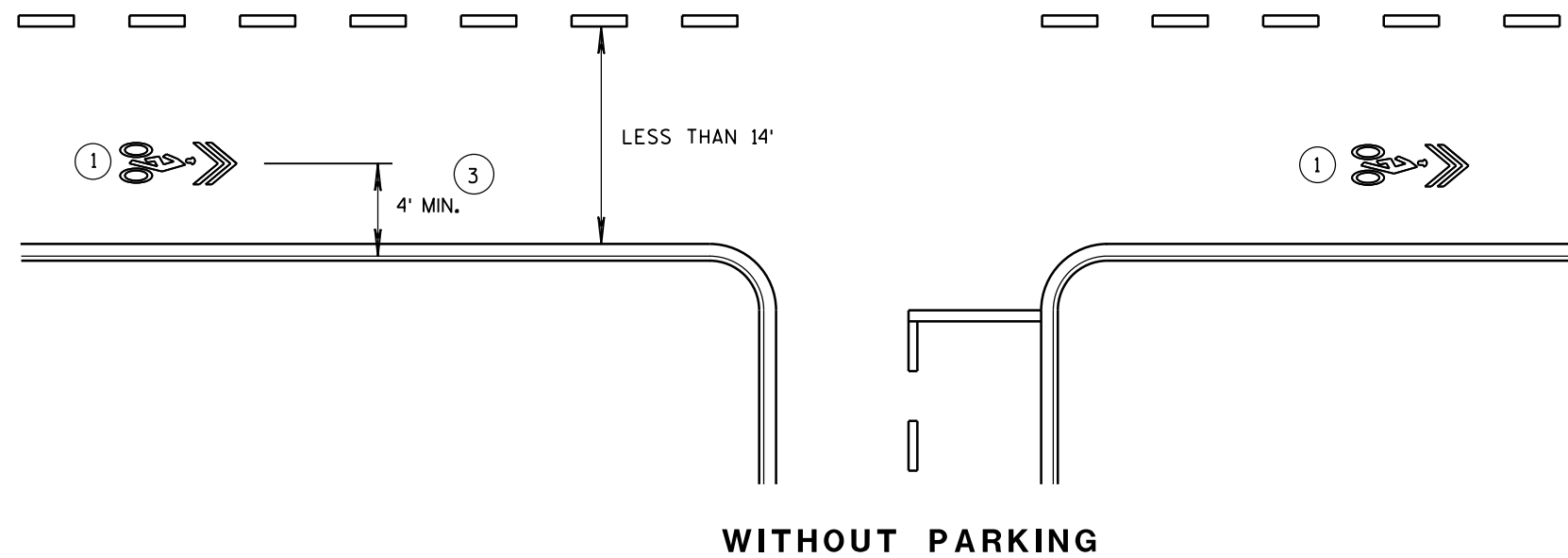


BIKE SYMBOL FOR SHARED LANE

GENERAL NOTES

ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

- ① SPACED A MAXIMUM OF 250 FEET.
- ② 20 FOOT MINIMUM FROM CURB RADIUS.
- ③ OR TO EDGE OF PAVEMENT WITHOUT CURB.



PAVEMENT MARKING FOR
SHARED LANE
35 MPH OR LESS

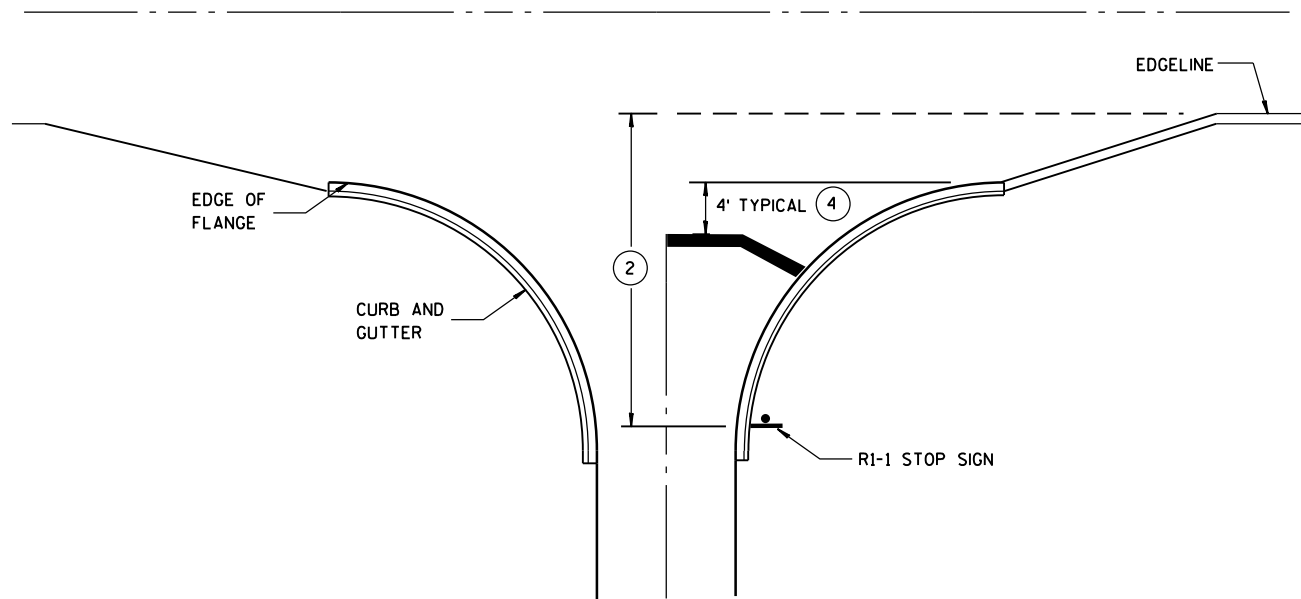
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

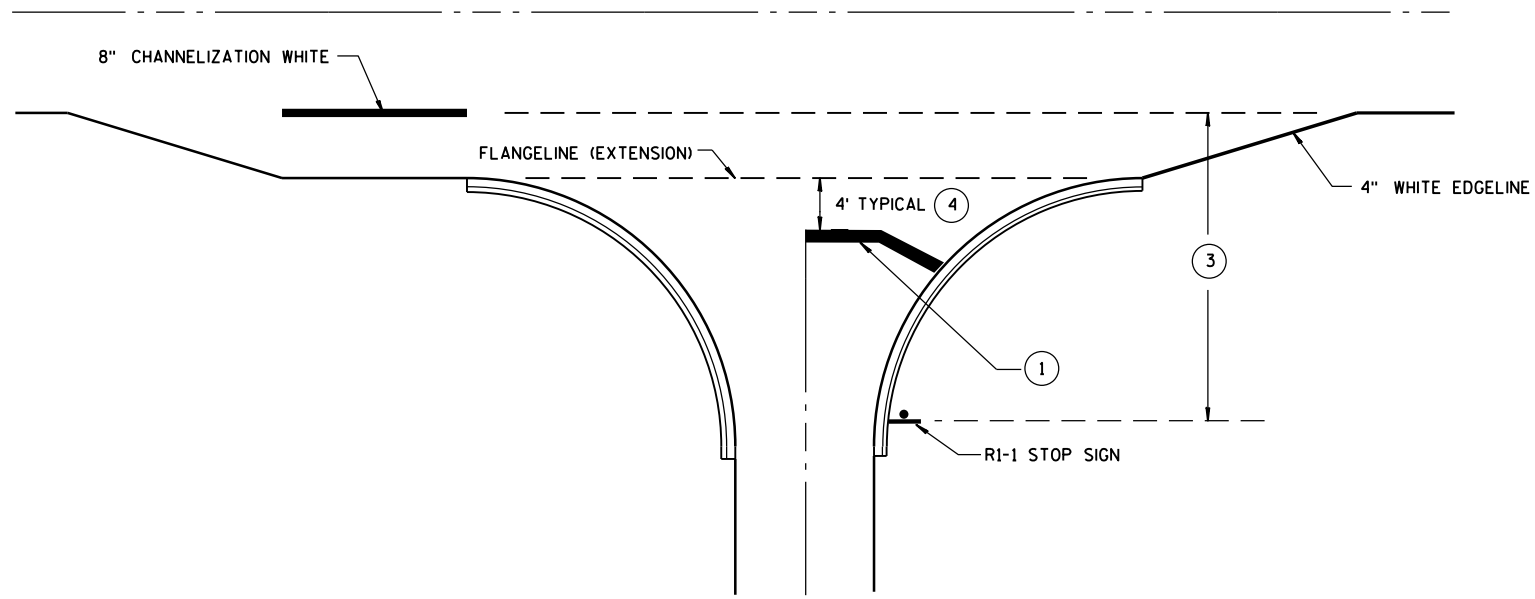
4-30-2013
DATE

FHWA

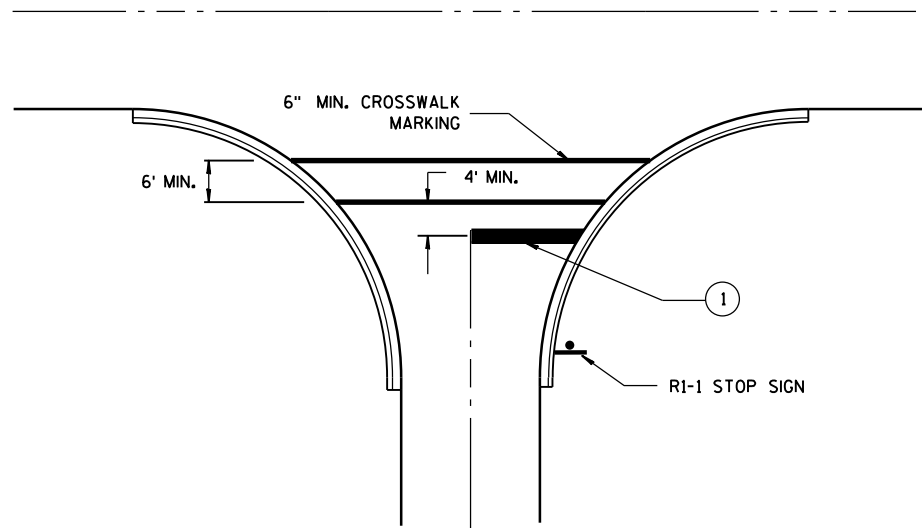
/S/ Travis Feltes
STATE TRAFFIC ENGINEER



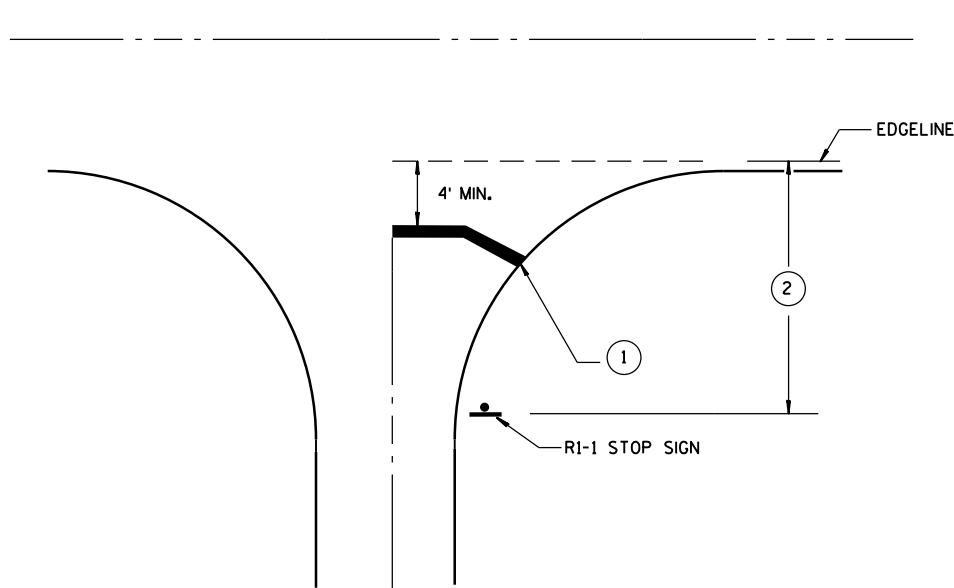
TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

GENERAL NOTES

- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THAN NO STOP LINE IS REQUIRED.
- ③ IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- ④ MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK
PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/30/2013 DATE /S/ Travis Feltz
STATE TRAFFIC ENGINEER
FHWA

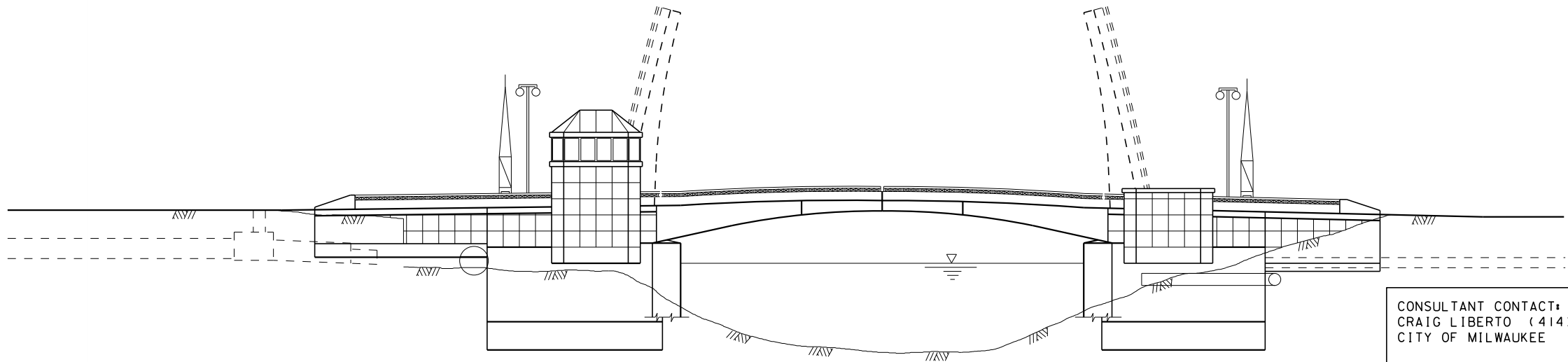
W:\STR\B0200\ 201BIKE PLATES\ 01.TITLE.DGN 02-03-2014

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
INFRASTRUCTURE SERVICES DIVISION

STATE PROJECT NUMBER

1302 - 00 - 71

SOUTH KINNICKINNIC AVENUE BASCULE BRIDGE
OVER THE KINNICKINNIC RIVER
B-40-591
METAL PLATES FOR BIKE LANES
ON BASCULE SPAN



EAST ELEVATION

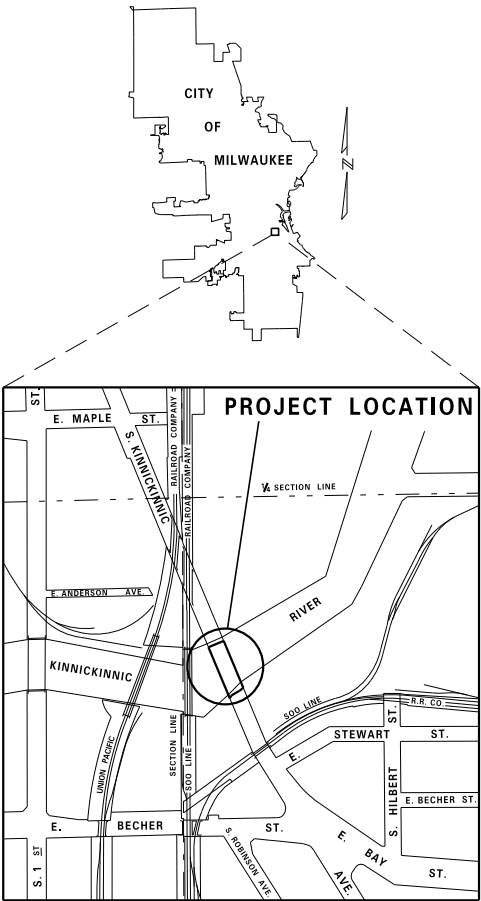
N.T.S.

LIST OF DRAWINGS

1. TITLE SHEET
2. SITE PLAN
3. EXISTING FRAMING PLAN
4. TYPICAL SECTION AND DETAILS
5. BASCULE SPAN COUNTERWEIGHT BALANCING

ESTIMATE OF QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
SPV.0085	BALANCING BLOCK STEEL (B-40-591)	LB	16,214
SPV.0105	REDISTRIBUTION OF EXISTING BALANCING BLOCK (B-40-591)	LS	1
SPV.0105	COUNTERWEIGHT BALANCING CALCULATIONS (B-40-591)	LS	1
SPV.0165	METAL PLATES FOR BIKE LANES (B-40-591)	SF	676



LAYOUT

SCALE: 1" = 400'

CONSULTANT CONTACT:
CRAIG LIBERTO (414)286-3294
CITY OF MILWAUKEE

WISDOT CONTACT:
WILLIAM DREHER (608)266-8489

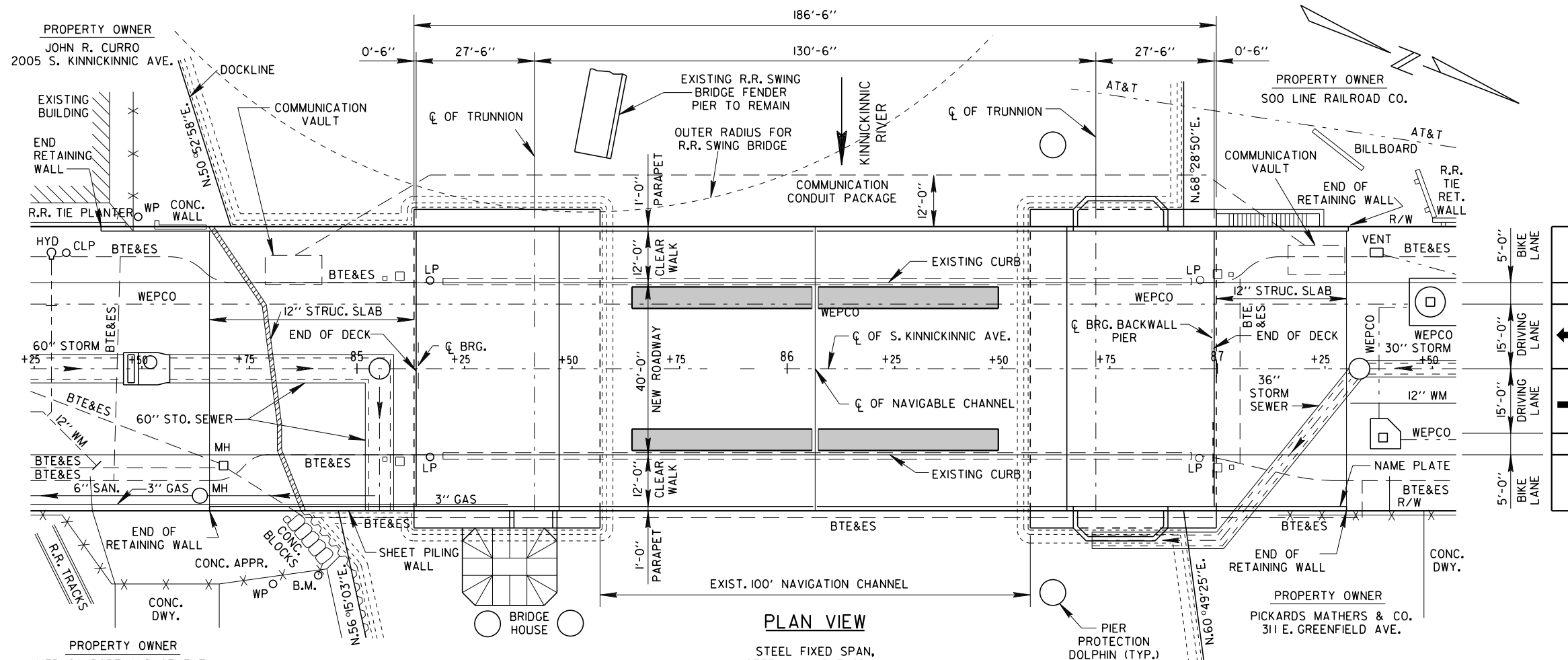


NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY CITY OF MILWAUKEE DEPARTMENT OF PUBLIC WORKS INFRASTRUCTURE SERVICES DIVISION			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	<i>William C. Dreher</i>	KAR	02/14/14
CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-40-591			
S KINNICKINNIC AVE OVER KINNICKINNIC RIVER			
COUNTY	MILWAUKEE	TOWN/CITY/VILLAGE	MILWAUKEE
DESIGN SPEC. AASHTO LRFD DESIGN SPEC. 5TH EDITION			
DESIGNED BY	DESIGN CK'D.	DRAWN	PLANS
JDT	AR	BY	CK'D. AR
TITLE SHEET			SHEET 1 OF 5

W:\STR\B0200\ 201BIKE PLATES \ 02 SITE.DGN 08-16-2013

STATE PROJECT NUMBER

1302 - 00 - 71



TRAFFIC VOLUME

ADT (2012) = 8,500
ADT (2032) = 9,800
RDS = 35 MPH

GENERAL NOTES

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL
STRUCTURE PLANS.

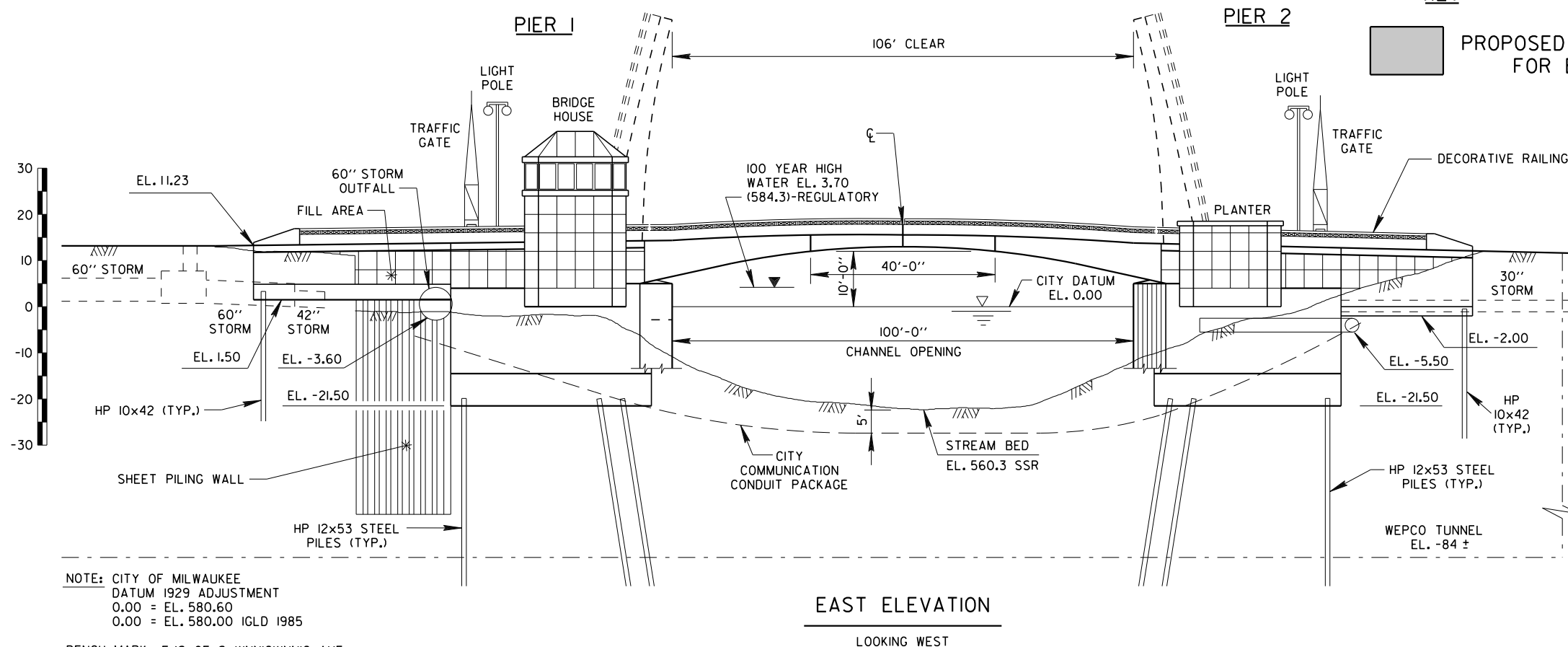
ALL DETAILS, MATERIALS AND FABRICATION SHALL
CONFORM TO THE STANDARD SPECIFICATIONS FOR
HIGHWAY AND STRUCTURE CONSTRUCTION OF THE
STATE OF WISCONSIN DEPARTMENT OF
TRANSPORTATION EDITION OF 2014 EXCEPT AS
OTHERWISE NOTED.

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.

ALL ELEVATIONS ARE REFERRED TO CITY OF
MILWAUKEE DATUM.

DRAWINGS SHALL NOT BE SCALED.

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.

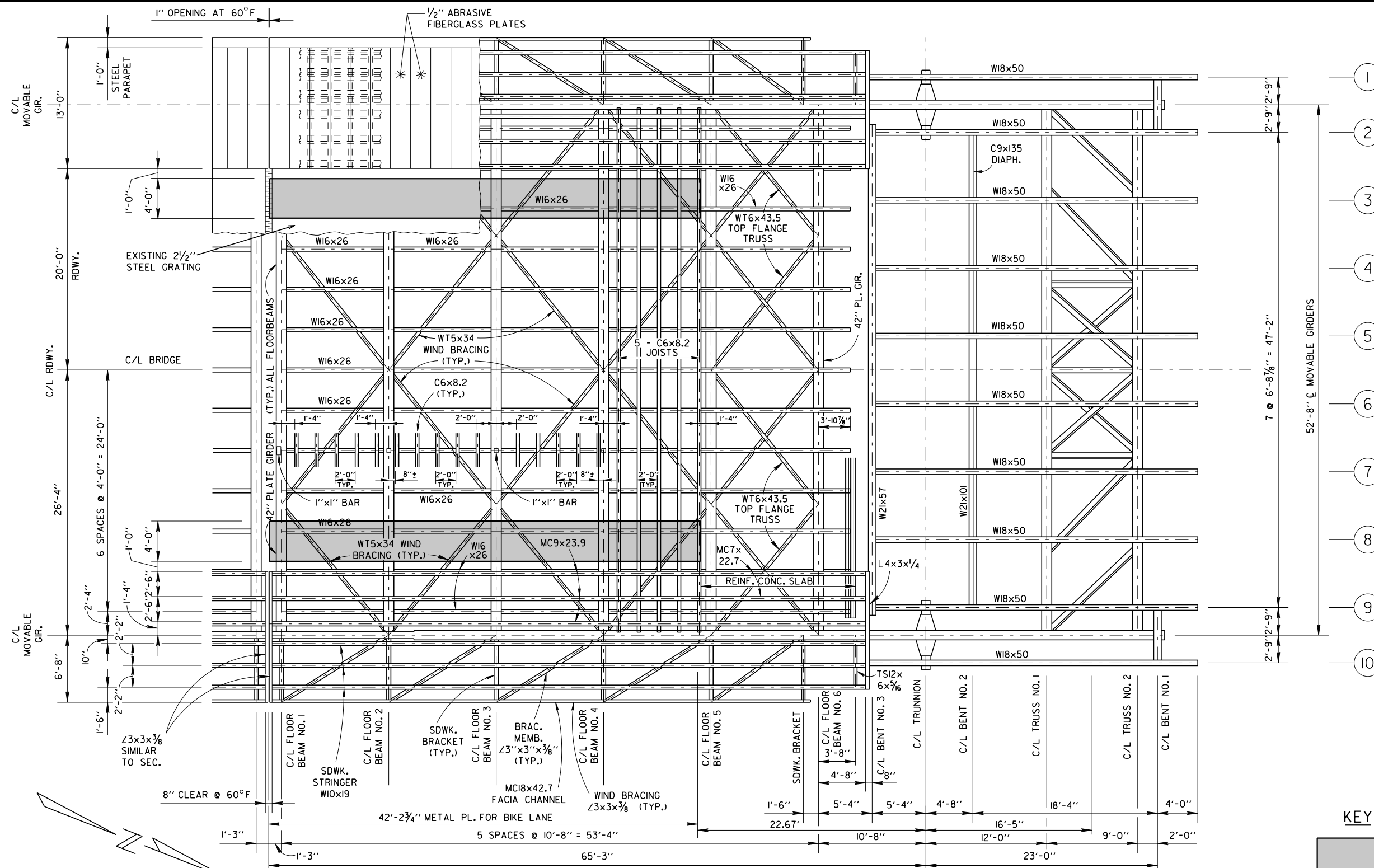


NO.	DATE	REVISION	BY
		STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION	
		STRUCTURE B-40-59I	
		DRAWN BY JPH PLANS CK'D. JDT AR	
		SITE PLAN	SHEET 2 OF 5

W:\STR\B0200\201BIKE PLATES\03_FRAME.DGN 02-12-2014

STATE PROJECT NUMBER

1302 - 00 - 71



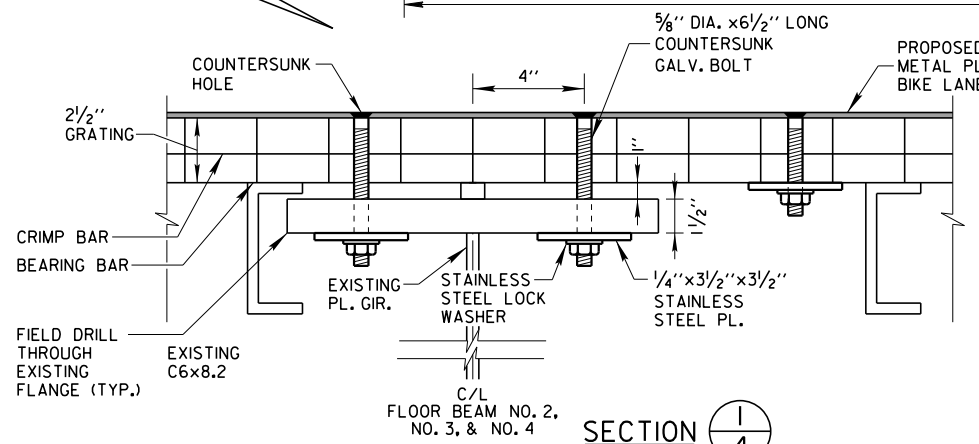
KEY



PROPOSED METAL PLATES
FOR BIKE LANES

8

8



EXISTING STEEL FRAMING PLAN

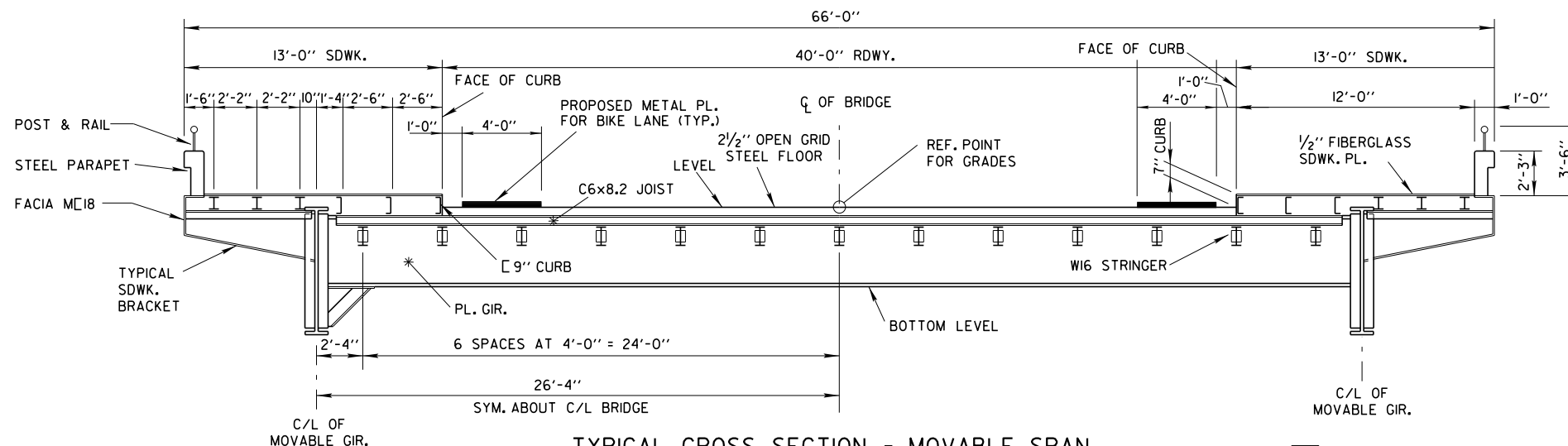
ELEVATIONS - TOP DECK - MOVABLE LEAF								
LOCATION	CENTER BREAK	FB-1	FB-2	FB-3	FB-4	FB-5	FB-6	REAR BREAK
W. FASCIA	15.08	15.08	15.06	15.00	14.90	14.77	14.60	14.52
W. CURB	15.08	15.08	15.06	15.00	14.90	14.77	14.60	14.52
CL	14.50	14.50	14.48	14.42	14.32	14.19	14.02	13.94
E. CURB	14.50	14.50	14.48	14.42	14.32	14.19	14.02	13.94
E. FASCIA	15.08	15.08	15.06	15.00	14.90	14.77	14.60	14.52

ELEVATIONS SHOWN AT TOP OF GRATING, CONCRETE SLAB OR WALK PLATES

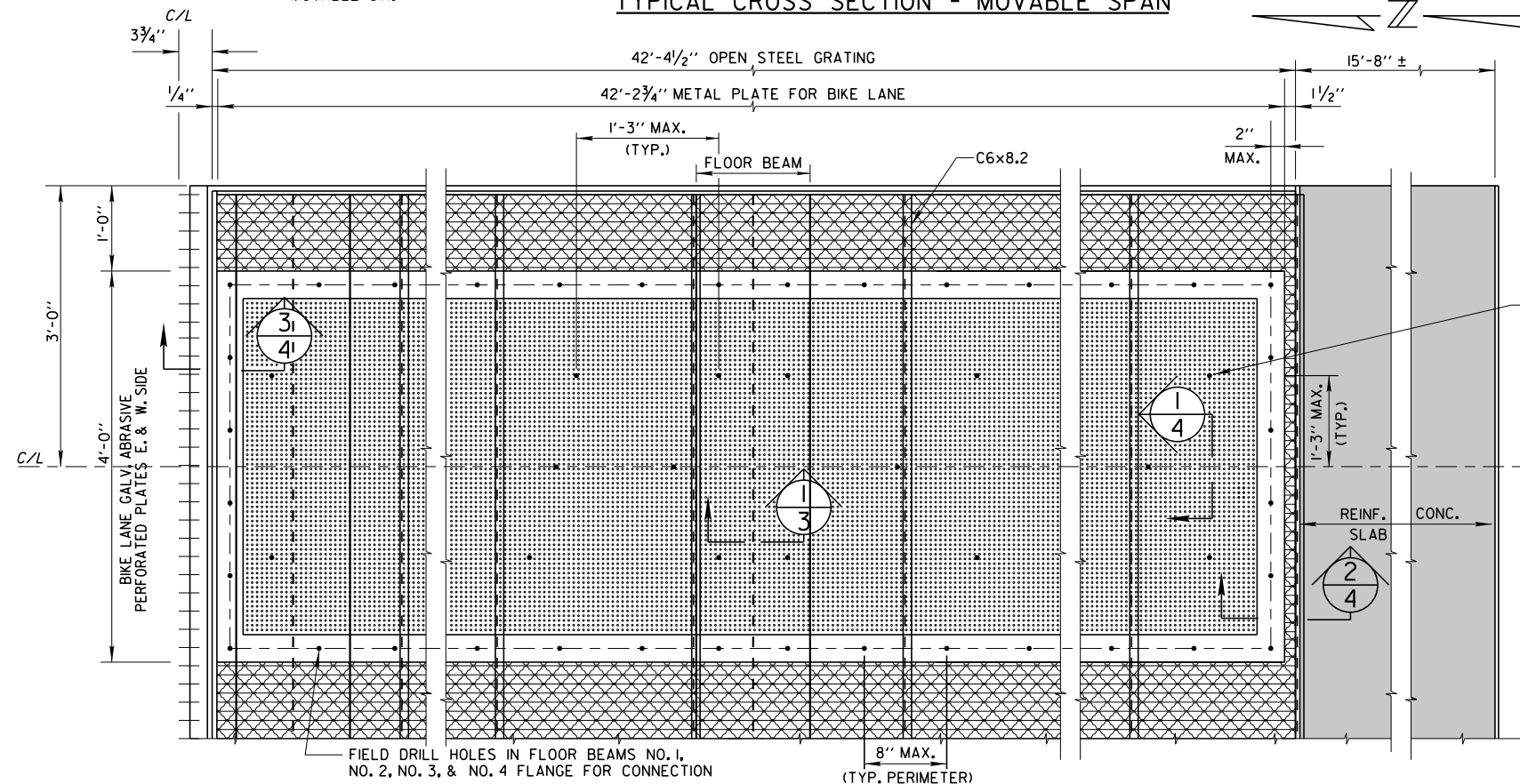
NOTE:

INFORMATION SHOWN ON THIS SHEET WAS REPRODUCED FROM THE ORIGINAL DESIGN PLANS AND REPRESENTS THE BEST INFORMATION AVAILABLE. THIS INFORMATION IS NOT GUARANTEED AND THE CONTRACTOR SHALL VIEW THE STRUCTURE AND FIELD VERIFY ANY NECESSARY DIMENSIONS IN ORDER TO MAKE HIS OWN DETERMINATION OF CONDITIONS TO BE ENCOUNTERED.

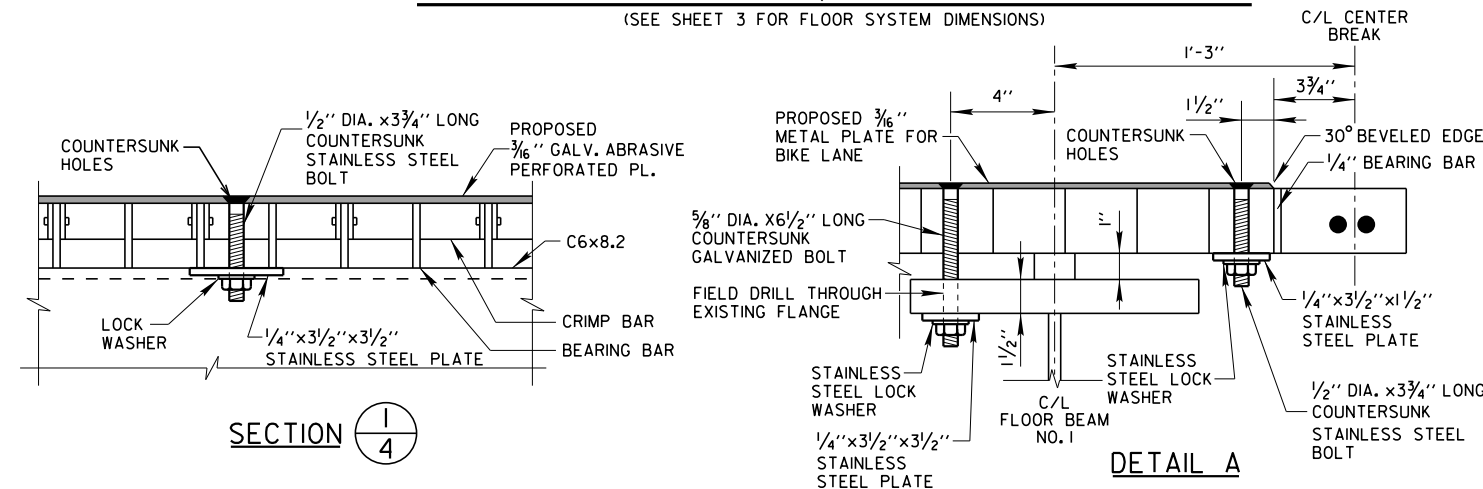
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-40-59I			
DRAWN BY JPH		PLANS CK'D. JDT	AR
EXISTING FRAMING PLAN		SHEET 3 OF 5	



TYPICAL CROSS SECTION - MOVABLE SPAN

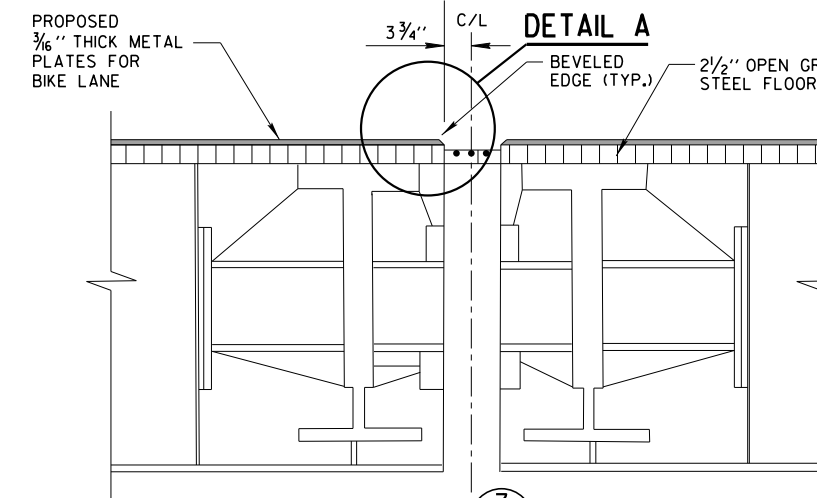


PROPOSED METAL PLATES FOR BIKE LANES GENERAL SCHEME
EAST BICYCLE LANE SHOWN, WEST BICYCLE LANE SIMILAR
(SEE SHEET 3 FOR FLOOR SYSTEM DIMENSIONS)

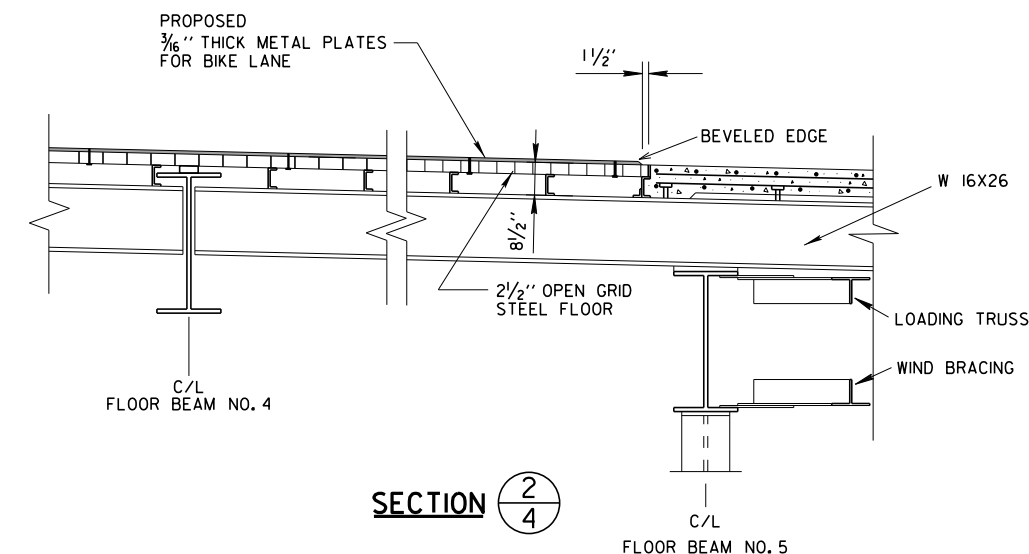


SECTION 1/4

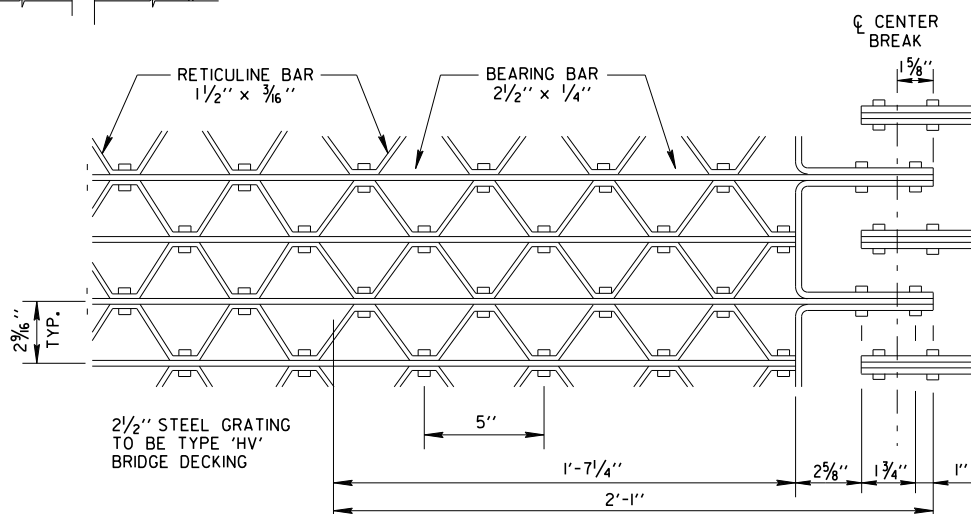
DETAIL A



NOTE: DIMENSIONS TO EDGE OF 2 1/2" STEEL GRATING



SECTION 2/4



DETAIL OF CENTER BRAKE
FOR STEEL GRATING

PERFORATED PLATE NOTES:

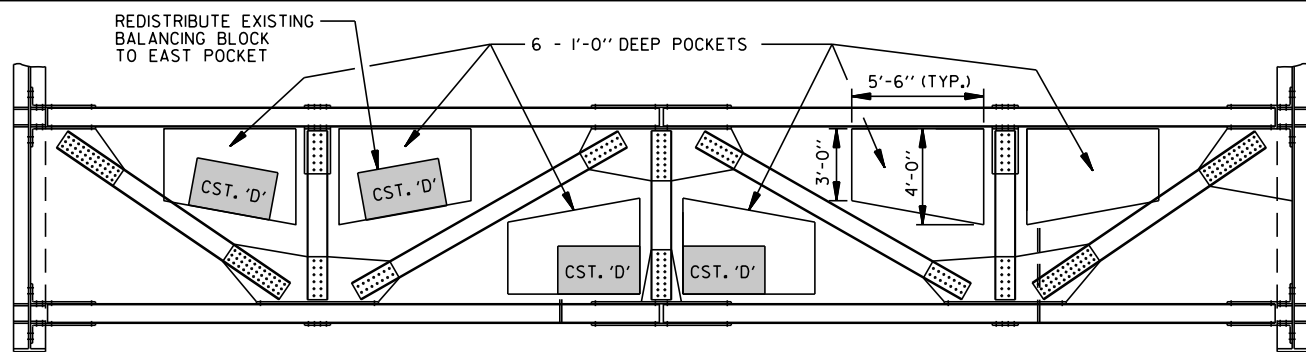
1. 3/16" PLATE SHALL CONFORM TO ASTM A36 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
2. ABRASIVE COATING SHALL BE APPLIED TO TOP SURFACE OF BICYCLE PLATE ACCORDING TO MANUFACTURER'S SPECIFICATIONS. PLATE IS TO BE HOT DIP GALVANIZED AFTER APPLICATION OF ABRASIVE COATING.
3. CONTRACTOR TO FIELD VERIFY EXISTING STEEL GRATING AND SHALL SUBMIT SHOP DRAWINGS FOR REVIEW.
4. EXTERIOR EDGES SHALL BE BEVELED.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-40-59I			
DRAWN BY JPH		PLANS CK'D. JDT	AR
TYPICAL SECTION AND DETAILS			SHEET 4 OF 5

W:\STR\B0200\201BIKE PLATES\05.CW3.DGN 02-04-2014

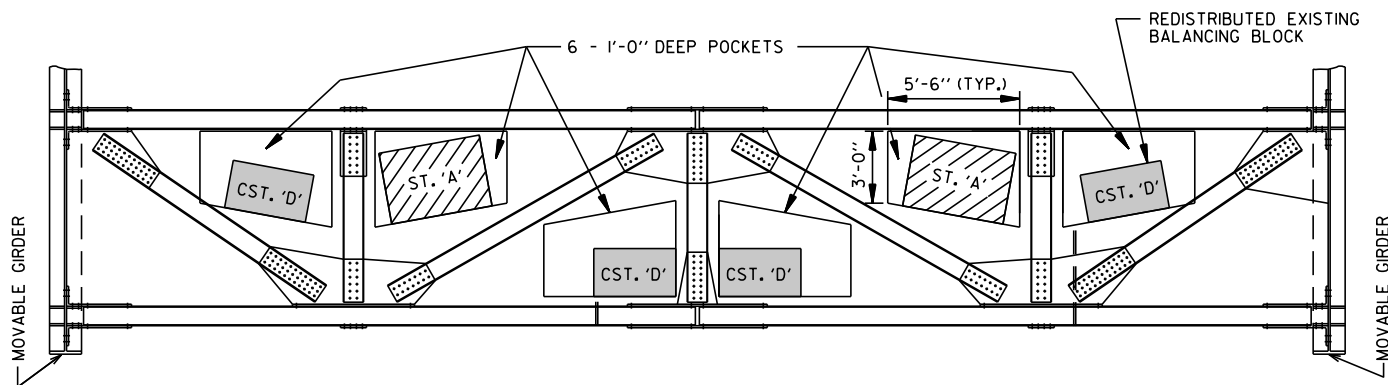
STATE PROJECT NUMBER

1302 - 00 - 71



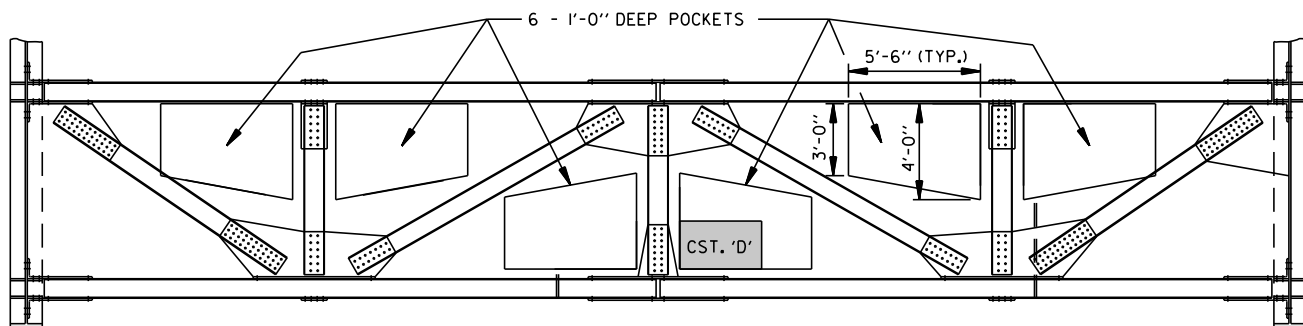
SOUTH LEAF COUNTERWEIGHT ADJUSTING POCKETS - EXISTING CONDITIONS

SCALE: 1/4" = 1'-0"



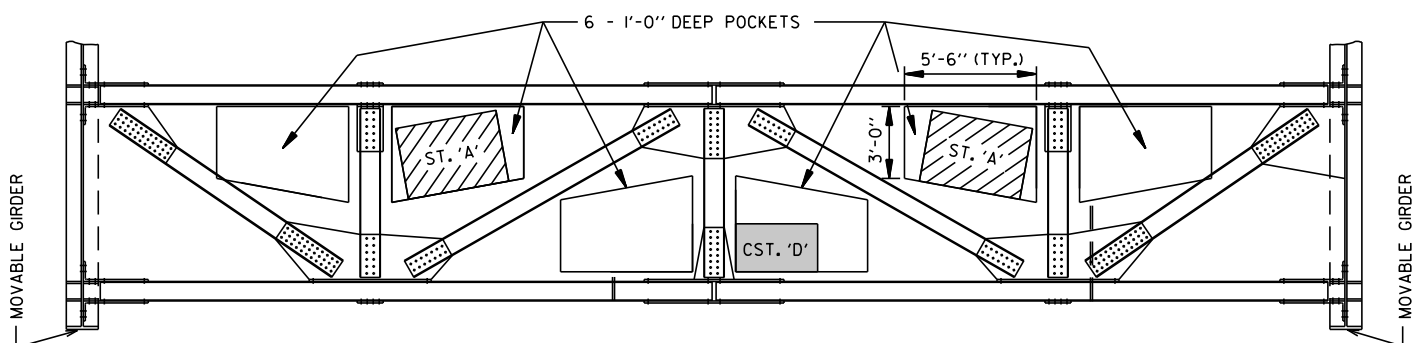
SOUTH LEAF COUNTERWEIGHT ADJUSTING POCKETS - PROPOSED CONDITIONS

SCALE: 1/4" = 1'-0"



NORTH LEAF COUNTERWEIGHT ADJUSTING POCKETS - EXISTING CONDITIONS

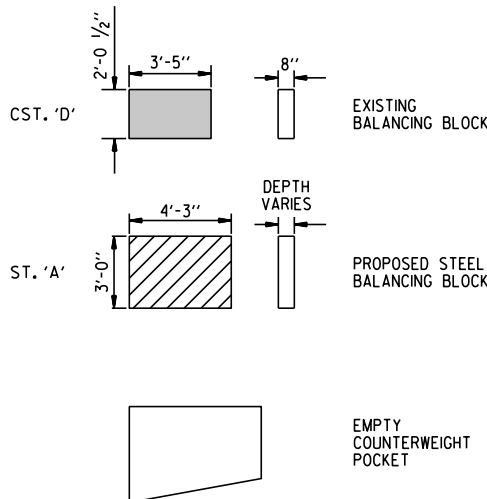
SCALE: 1/4" = 1'-0"



NORTH LEAF COUNTERWEIGHT ADJUSTING POCKETS - PROPOSED CONDITIONS

SCALE: 1/4" = 1'-0"

LEGEND



NOTES

1. CONTRACTOR MUST PERFORM FINAL BALANCING CALCULATIONS TO DETERMINE FINAL DIMENSIONS OF PROPOSED BALANCING BLOCK STEEL.
2. PROPOSED BALANCING BLOCK DIMENSIONS ARE APPROXIMATE AND CONTRACTOR MAY ADJUST THE DIMENSIONS BASED ON BALANCING CALCULATION RESULTS, ADJUSTING POCKET DIMENSIONS, AND INSTALLATION METHODS.
3. BALANCING BLOCK STEEL IS NOT REQUIRED TO BE ONE BLOCK, IF AN EQUIVALENT AMOUNT OF SMALLER MULTIPLE BLOCKS ARE PLACED IN A SINGLE COUNTERWEIGHT POCKET, THE CONTRACTOR MUST SUBMIT INFORMATION ON HOW THE BLOCKS WILL BE SECURED IN THE COUNTERWEIGHT POCKET.
4. CONTRACTOR MAY REDISTRIBUTE THE EXISTING BALANCING BLOCK AS SHOWN OR REMOVE THE EXISTING BALANCING BLOCK AND REPLACE WITH AN EQUIVALENT WEIGHT IN BALANCING BLOCK STEEL.

BALANCING SCHEDULE

ITEM	WEIGHT (LB)	DISTANCE FROM TRUNNION (FT)
NORTH LEAF		
METAL PLATES FOR BIKE LANE	2,639	43.78
PROPOSED BALANCING BLOCKS	8,107	-14.25
SOUTH LEAF		
METAL PLATES FOR BIKE LANE	2,639	43.78
PROPOSED BALANCING BLOCKS	8,107	-14.25

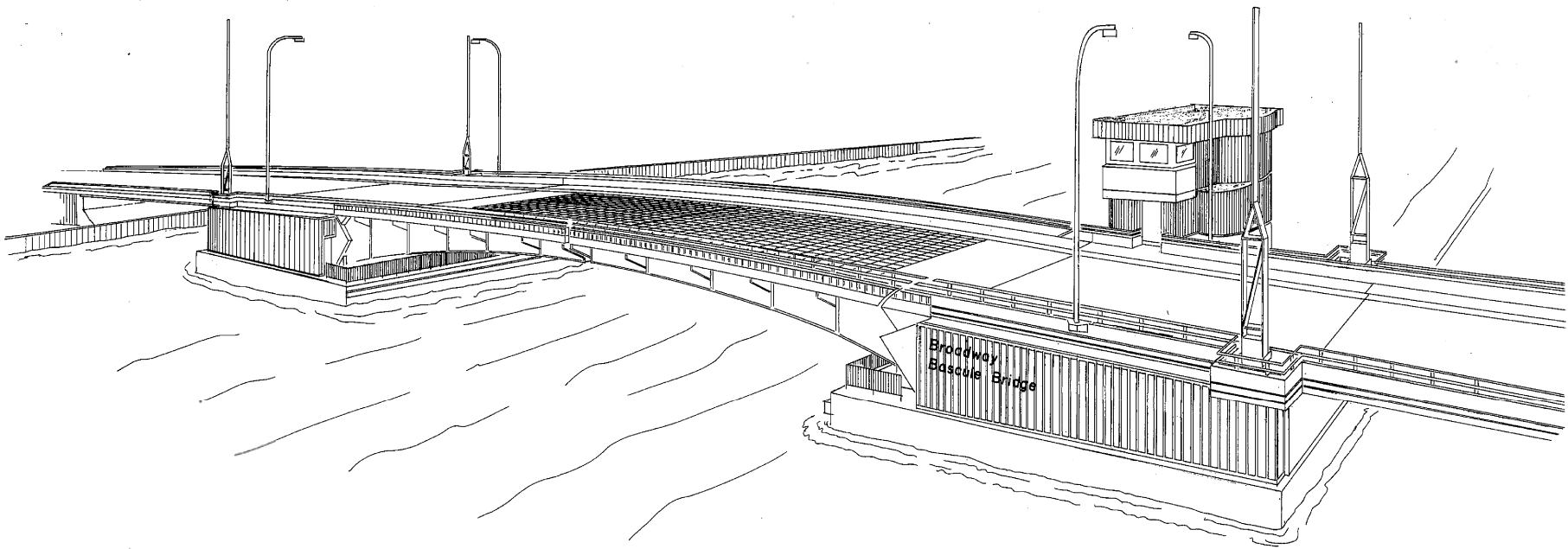
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-40-59I			
DRAWN BY JPH		PLANS CK'D. JDT	AR
BASCULE SPAN COUNTERWEIGHT BALANCING		SHEET 5 OF 5	

W:\STR\B0100\ 2014\BIKE PLATES\ 01.TITLE.DGN 02-03-2014

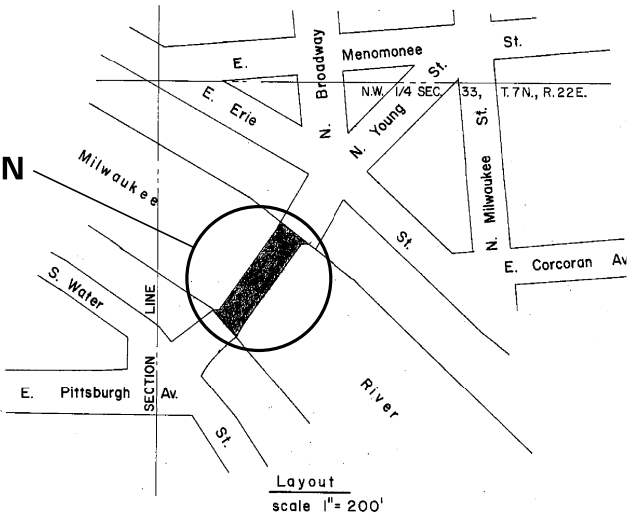
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
INFRASTRUCTURE SERVICES DIVISION
**BROADWAY BASCULE BRIDGE
OVER THE MILWAUKEE RIVER**

B-40-952

**METAL PLATES FOR BIKE LANES
ON BASCULE SPAN**



PROJECT LOCATION



CONSULTANT CONTACT:
CRAIG LIBERTO (414)286-3294
CITY OF MILWAUKEE

WISDOT CONTACT:
WILLIAM DREHER (608)266-8489



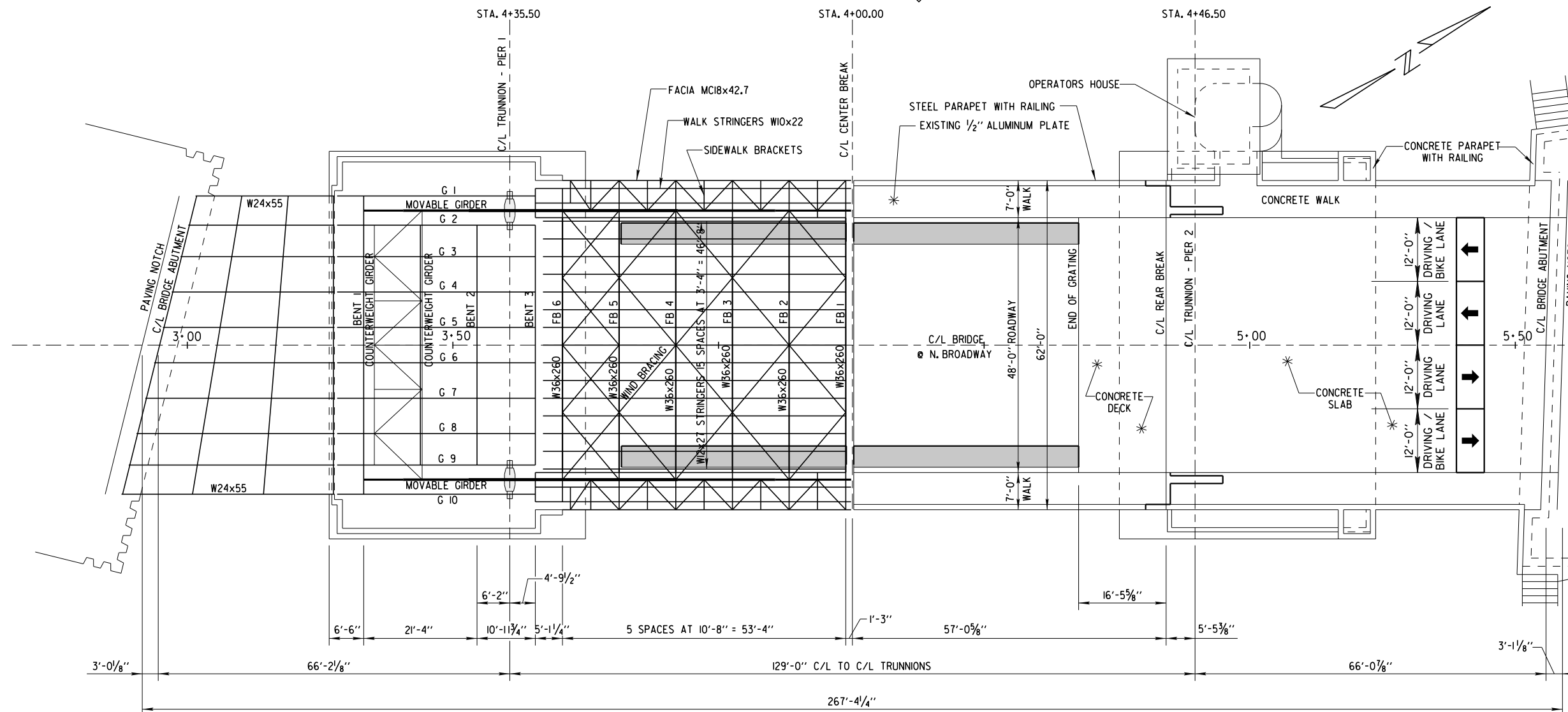
LIST OF DRAWINGS

1. TITLE SHEET
2. SITE PLAN
3. EXISTING FRAMING PLAN
4. TYPICAL SECTION AND DETAILS
5. BASCULE SPAN COUNTERWEIGHT BALANCING

ESTIMATE OF QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
SPV.0085	BALANCING BLOCK STEEL (B-40-952)	LB	10,828
SPV.0105	COUNTERWEIGHT BALANCING CALCULATIONS (B-40-952)	LS	1
SPV.0165	METAL PLATES FOR BIKE LANES (B-40-952)	SF	677

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY CITY OF MILWAUKEE DEPARTMENT OF PUBLIC WORKS INFRASTRUCTURE SERVICES DIVISION			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	<i>William C. Dreher</i>	KAR	02/14/14
CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-40-952			
BROADWAY OVER THE MILWAUKEE RIVER			
COUNTY	MILWAUKEE	TOWN/CITY/VILLAGE	MILWAUKEE
DESIGN SPEC. AASHTO LRFD DESIGN SPEC. 5TH EDITION			
DESIGNED BY	DESIGN CK'D.	DRAWN	PLANS
JDT	AR	BY	CK'D.
TITLE SHEET			SHEET 1 OF 5



TRAFFIC VOLUME

ADT (2012) = 5,500
ADT (2032) = 6,300
RDS = 30 MPH

GENERAL NOTES

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL
STRUCTURE PLANS.

ALL DETAILS, MATERIALS AND FABRICATION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION OF THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION EDITION OF 2014 EXCEPT AS OTHERWISE NOTED.

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.

ALL ELEVATIONS ARE REFERRED TO CITY OF MILWAUKEE DATUM.

DRAWINGS SHALL NOT BE SCALED.

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.

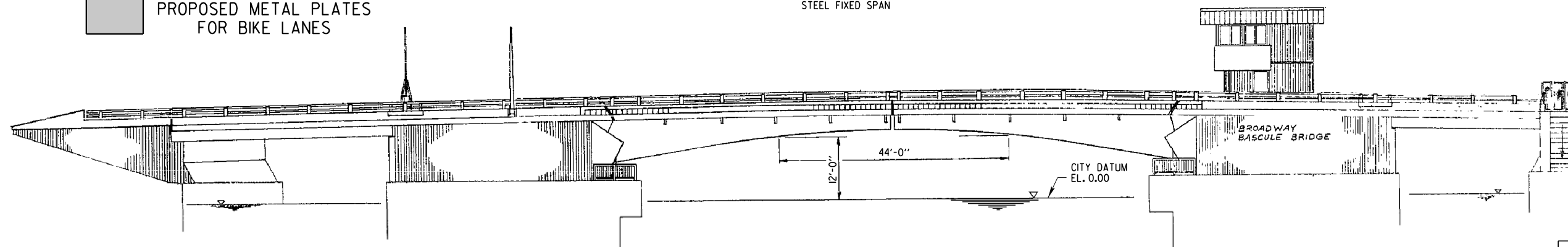
KEY



PROPOSED METAL PLATES FOR BIKE LANES

PLAN VIEW

STEEL FIXED SPAN
STEEL MOVABLE SPAN
STEEL FIXED SPAN



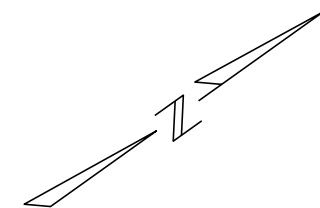
EAST ELEVATION

LOOKING WEST

NOTE:

CITY OF MILWAUKEE
DATUM 1929 ADJUSTMENT
0.00 = EL. 580.60
0.00 = EL. 580.00 ON IGLD 1985

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-40-952			
DRAWN BY		JPH	PLANS CK'D. JDA
SITE PLAN		SHEET 2 OF 5	

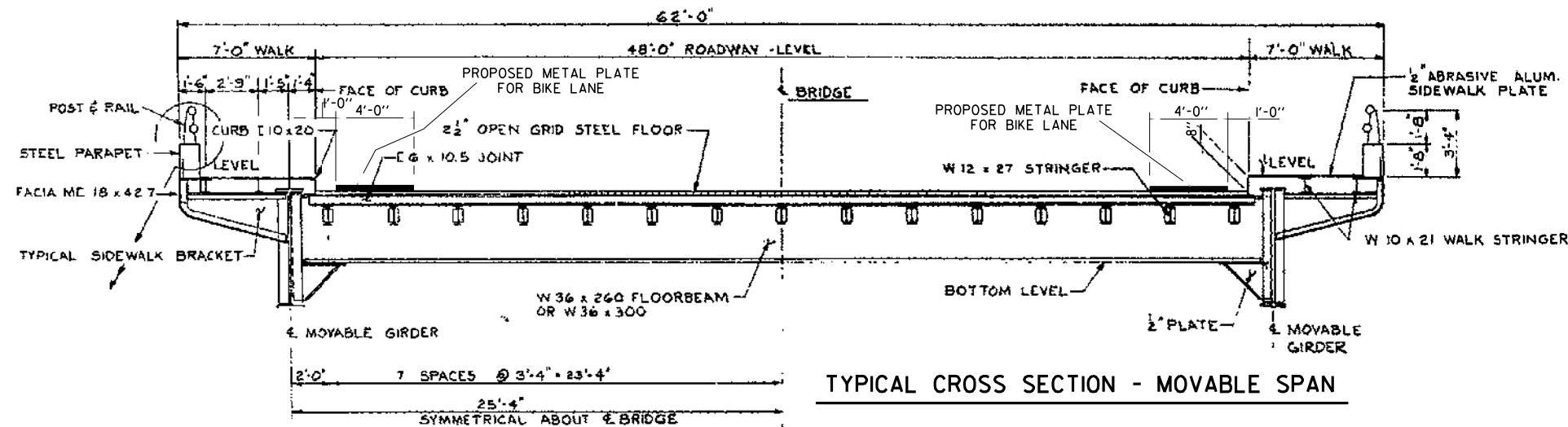


KEY

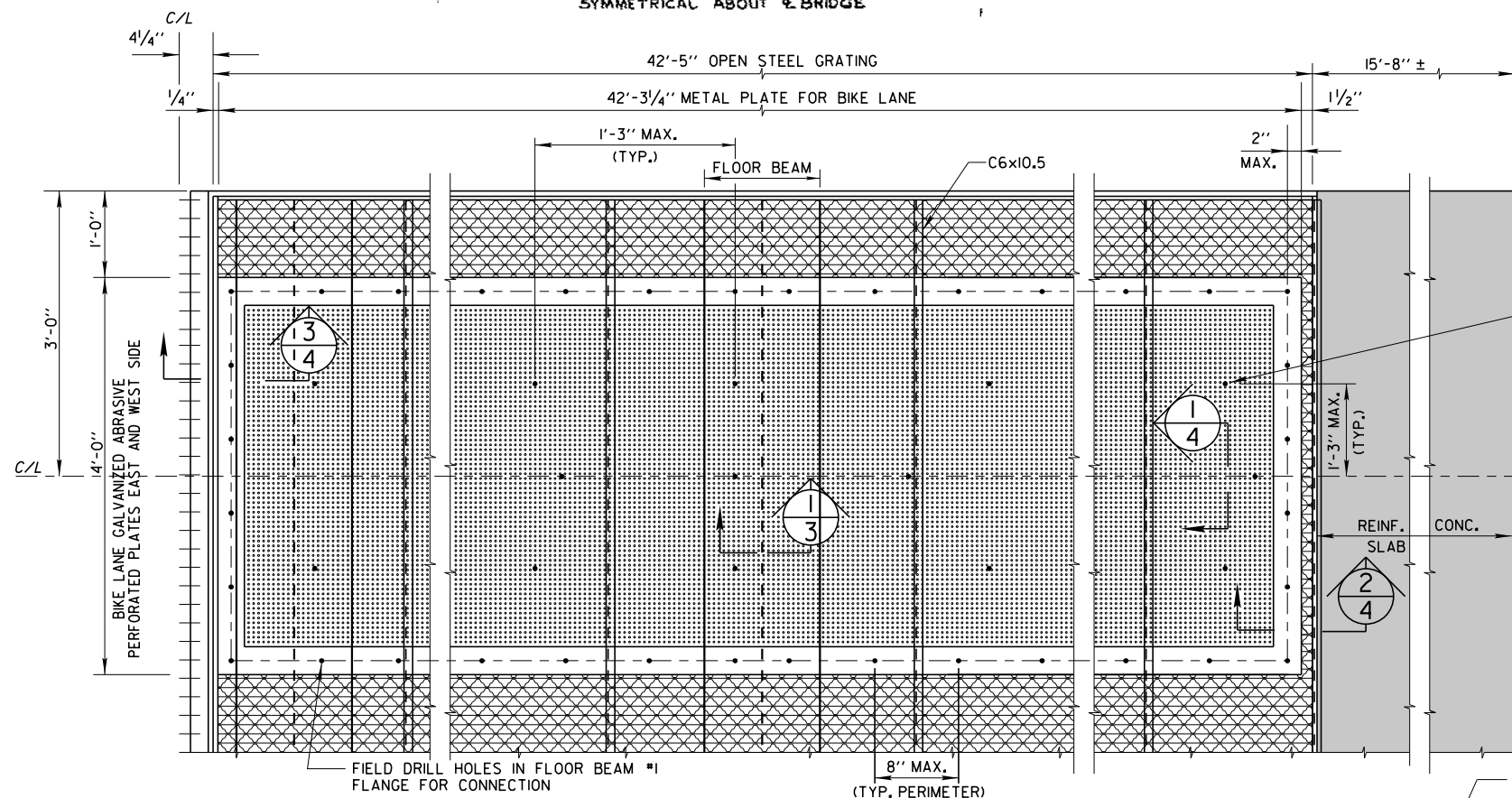
NOTE:
INFORMATION SHOWN ON THIS SHEET WAS REPRODUCED FROM
THE ORIGINAL DESIGN PLANS AND REPRESENTS THE BEST
INFORMATION AVAILABLE. THIS INFORMATION IS NOT GUARANTEED
AND THE CONTRACTOR SHALL VIEW THE STRUCTURE AND FIELD
VERIFY ANY NECESSARY DIMENSIONS IN ORDER TO MAKE HIS OWN
DETERMINATION OF CONDITIONS TO BE ENCOUNTERED.

ELEVATIONS SHOWN AT TOP OF GRATING, CONCRETE SLAB OR WALK PLATES.

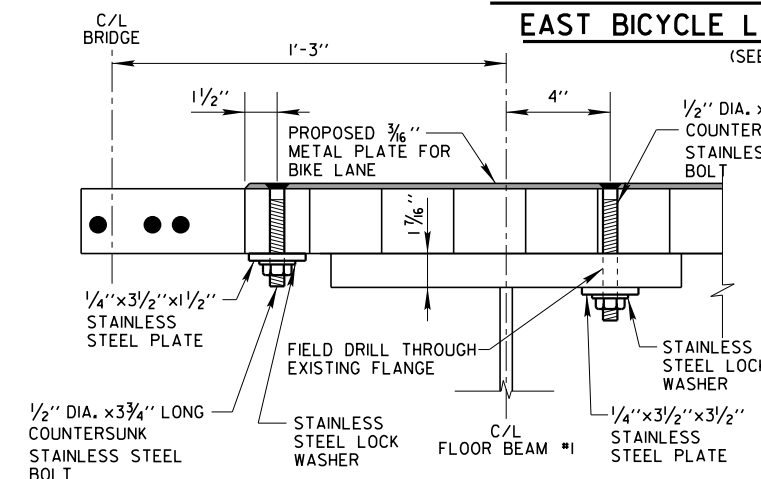
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-40-952			
DRAWN BY		JPH	PLANS CK'D.
JD		AL	
EXISTING FRAMING PLAN		SHEET 3 OF 5	



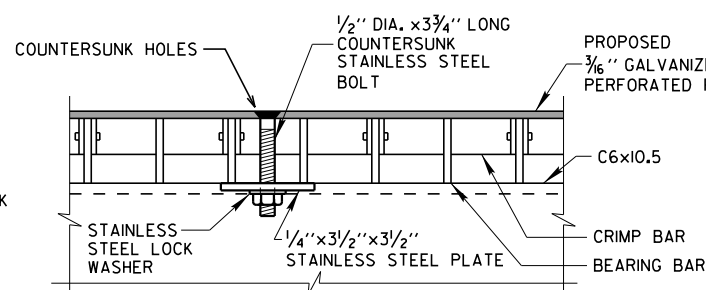
TYPICAL CROSS SECTION - MOVABLE SPAN



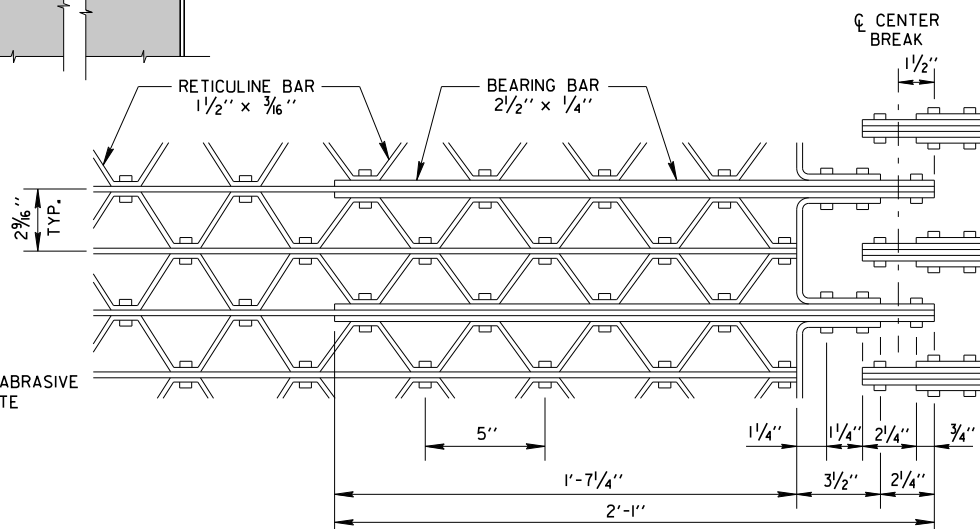
PROPOSED METAL PLATES FOR BIKE LANES GENERAL SCHEME
EAST BICYCLE LANE SHOWN, WEST BICYCLE LANE SIMILAR
(SEE SHEET 3 FOR FLOOR SYSTEM DIMENSIONS)



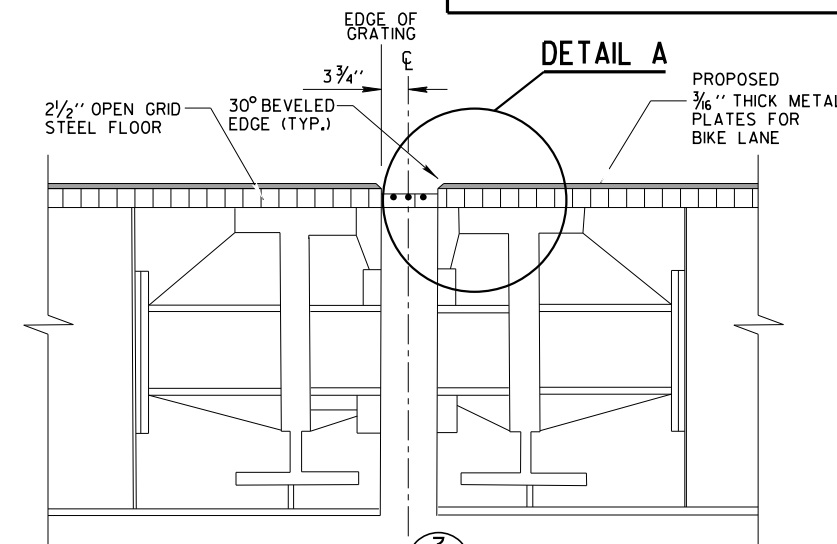
DETAIL A



SECTION 1/4

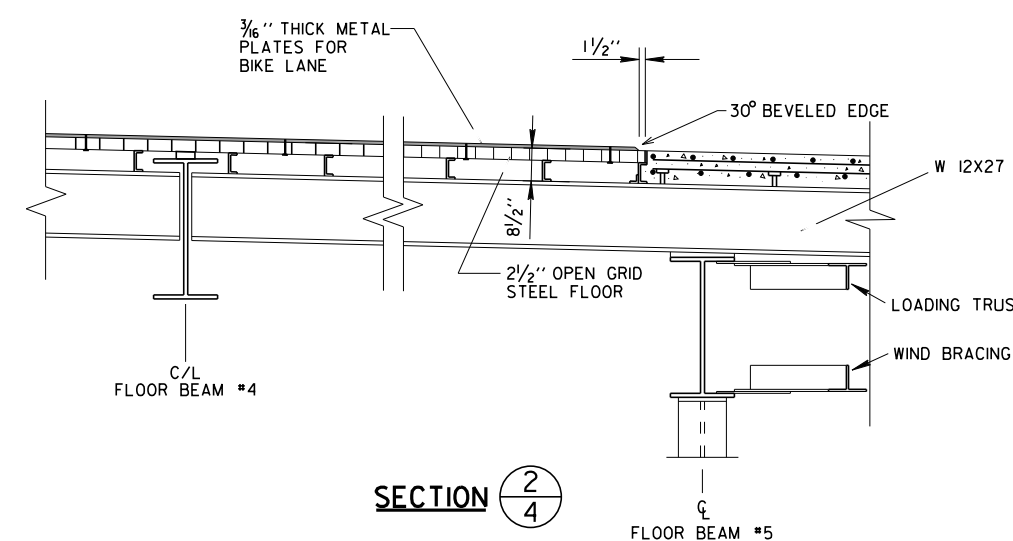


DETAIL OF CENTER BRAKE
FOR STEEL GRATING



SECTION 3/4

NOTE: DIMENSIONS TO EDGE OF 2 1/2" STEEL GRATING



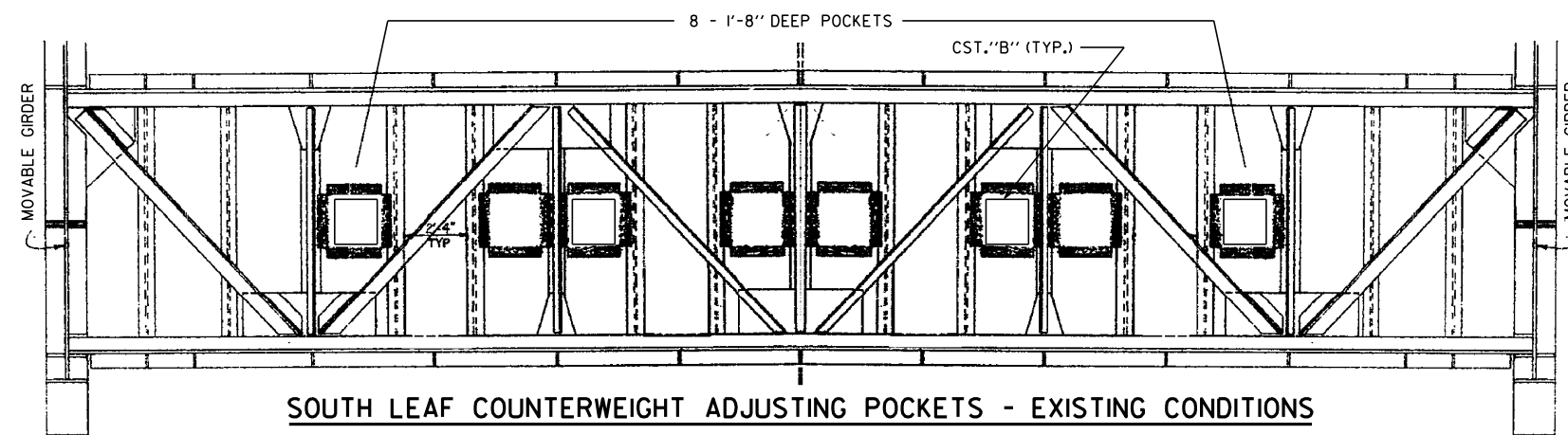
SECTION 2/4

PERFORATED PLATE NOTES:

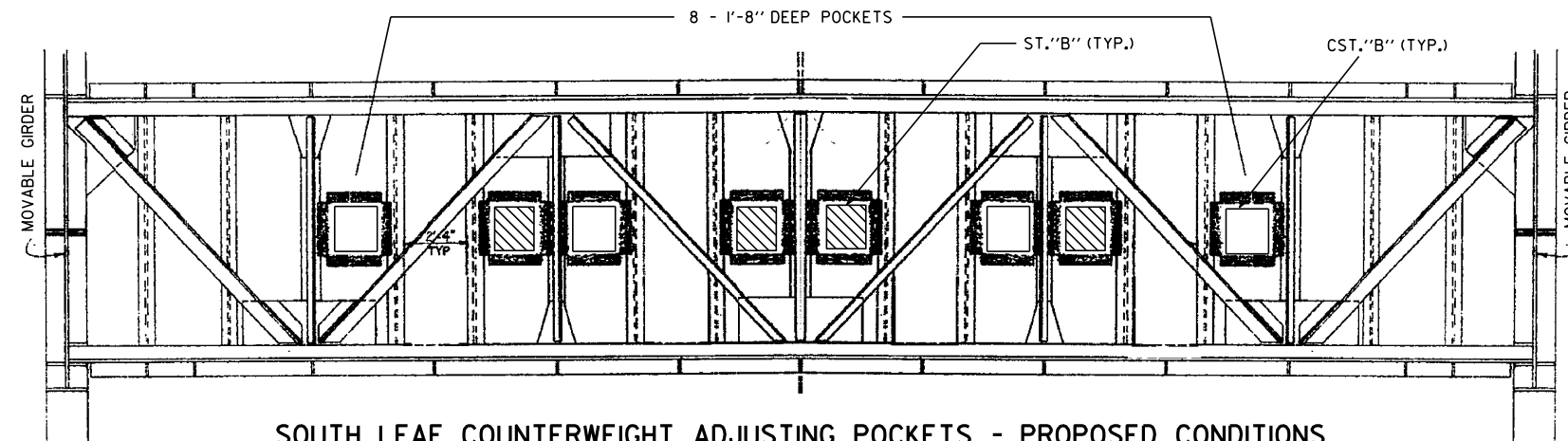
1. 3/16" PLATE SHALL CONFORM TO ASTM A36 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
2. ABRASIVE COATING SHALL BE APPLIED TO TOP SURFACE OF BICYCLE PLATE ACCORDING TO MANUFACTURER'S SPECIFICATIONS. PLATE IS TO BE HOT DIP GALVANIZED AFTER APPLICATION OF ABRASIVE COATING.
3. CONTRACTOR TO FIELD VERIFY EXISTING STEEL GRATING AND SHALL SUBMIT SHOP DRAWINGS FOR REVIEW.
4. EXTERIOR EDGES SHALL BE BEVELED.
5. JOINTS BETWEEN PLATES MAY NOT BE PLACED OVER FLOOR BEAMS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-40-952			
DRAWN BY JPH		PLANS CK'D. JDT	AR
TYPICAL SECTION AND DETAILS			SHEET 4 OF 5

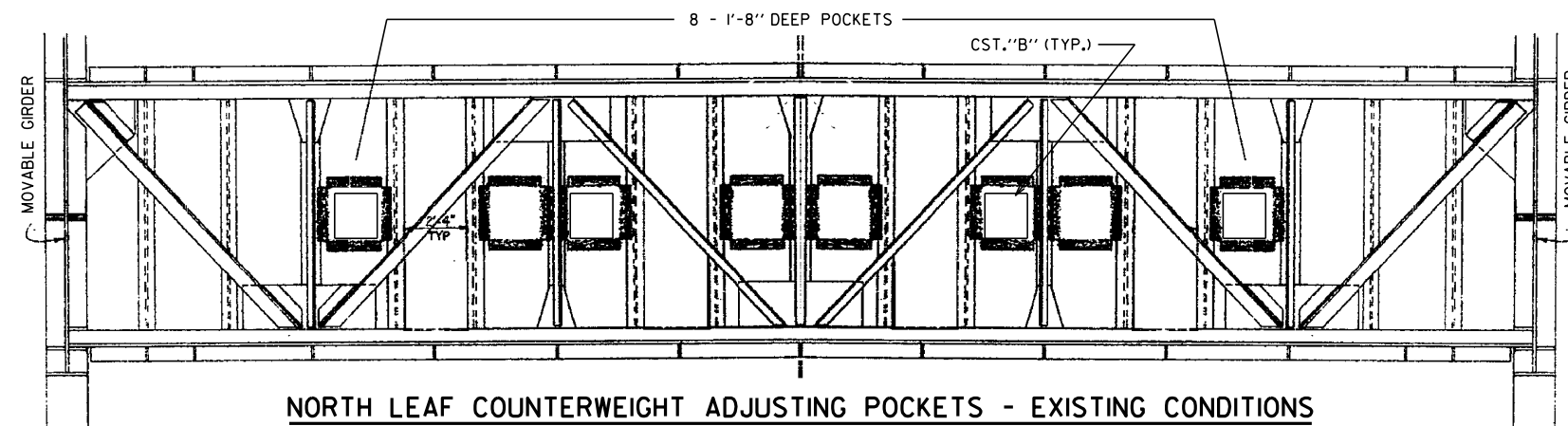
W:\STRABOON\2014BIKE PLATES\05.CW3.DGN 02-03-2014



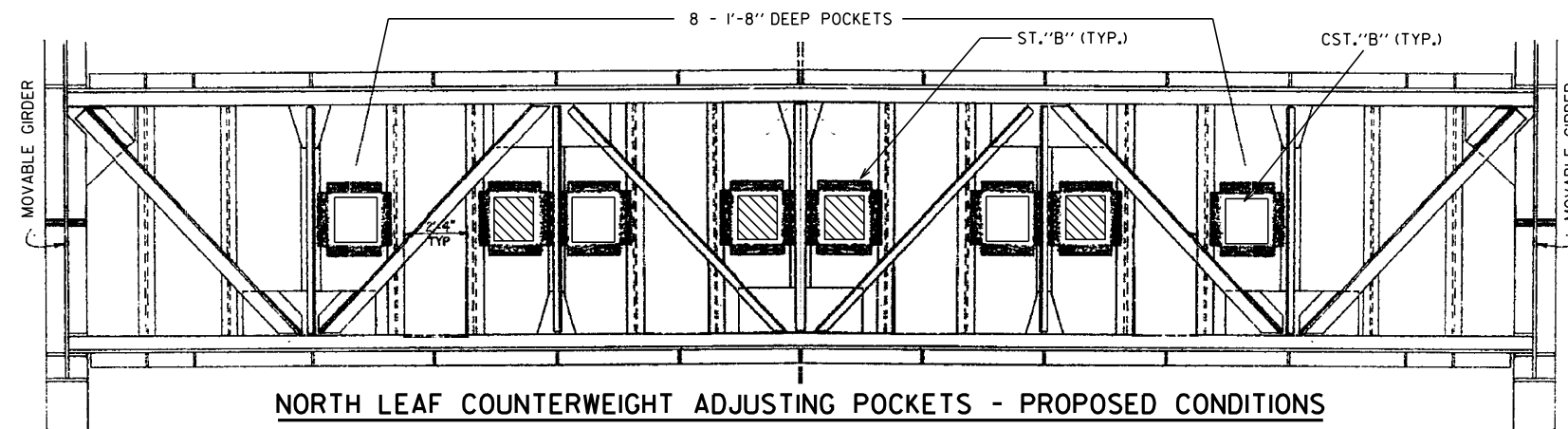
SOUTH LEAF COUNTERWEIGHT ADJUSTING POCKETS - EXISTING CONDITIONS



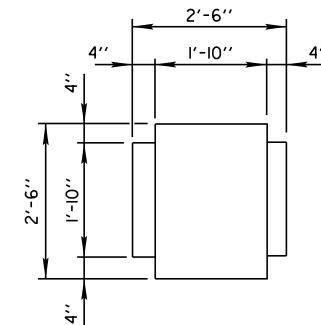
SOUTH LEAF COUNTERWEIGHT ADJUSTING POCKETS - PROPOSED CONDITIONS



NORTH LEAF COUNTERWEIGHT ADJUSTING POCKETS - EXISTING CONDITIONS



NORTH LEAF COUNTERWEIGHT ADJUSTING POCKETS - PROPOSED CONDITIONS

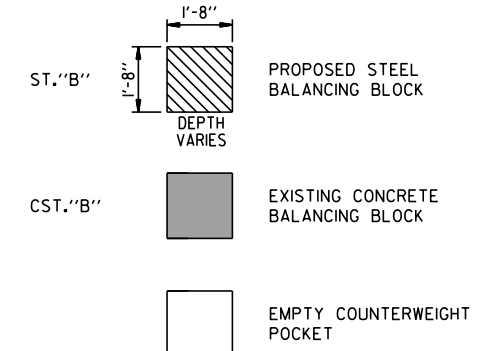


TYP. EXISTING POCKET

STATE PROJECT NUMBER

1302 - 00 - 71

LEGEND



BALANCING SCHEDULE

ITEM	WEIGHT (LB)	DISTANCE FROM TRUNNION (FT)
NORTH LEAF		
METAL PLATES FOR BIKE LANE	2,641	43.05
PROPOSED BALANCING BLOCKS	5,414	-21.00
SOUTH LEAF		
METAL PLATES FOR BIKE LANE	2,641	43.05
PROPOSED BALANCING BLOCKS	5,414	-21.00

NOTES

- CONTRACTOR MUST PERFORM FINAL BALANCING CALCULATIONS TO DETERMINE FINAL DIMENSIONS OF PROPOSED BALANCING BLOCK STEEL.
- PROPOSED BALANCING BLOCK DIMENSIONS ARE APPROXIMATE AND CONTRACTOR MAY ADJUST THE DIMENSIONS BASED ON BALANCING CALCULATION RESULTS, ADJUSTING POCKET DIMENSIONS, AND INSTALLATION METHODS.
- BALANCING BLOCK STEEL IS NOT REQUIRED TO BE ONE BLOCK. IF AN EQUIVALENT AMOUNT OF SMALLER MULTIPLE BLOCKS ARE PLACED IN A SINGLE COUNTERWEIGHT POCKET, THE CONTRACTOR MUST SUBMIT INFORMATION ON HOW THE BLOCKS WILL BE SECURED IN THE COUNTERWEIGHT POCKET.

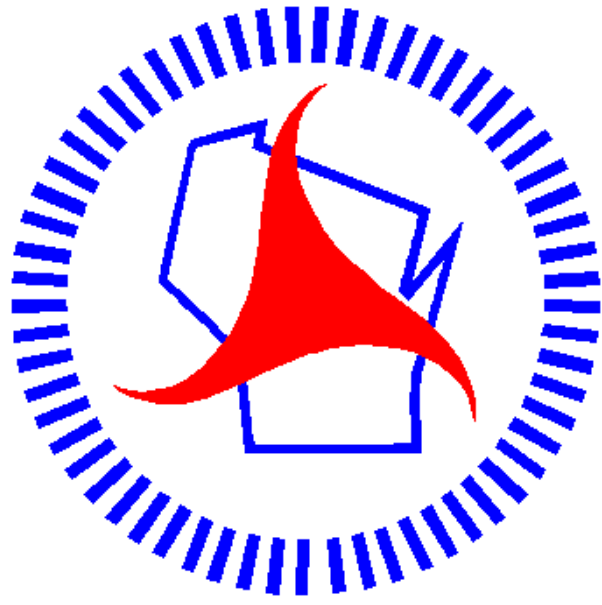
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-40-952			
DRAWN BY JPH		PLANS CK'D. JDT	AR
BASCULE SPAN COUNTERWEIGHT BALANCING		SHEET 5 OF 5	

CUT AND FILL QUANTITIES				
STATION	CUT (C.Y.)	FILL (C.Y.)	LARGEST CUT (FT.)	LARGEST FILL (FT.)
S. WATER ST.				
00+27	0	0	0.00	0.00
00+50	0	0	0.00	0.00
01+00	0	0	0.00	0.00
01+50	20	17	1.58	1.40
02+00	16	23	1.58	1.81
02+50	23	23	1.84	1.32
03+00	25	20	1.58	1.54
03+50	18	25	1.81	1.62
04+00	14	27	1.58	1.62
04+50	14	9	1.58	1.75
05+00	50	9	1.58	0.74
05+50	59	7	1.58	0.91
06+00	62	9	0.93	1.08
06+50	52	9	0.72	1.33
07+00	53	11	0.98	0.93
07+50	54	14	0.80	1.15
08+00	36	14	0.56	1.42
08+50	31	12	0.51	1.38
09+00	32	11	0.57	1.37
09+50	27	11	0.41	1.20
10+00	20	10	0.38	1.22
10+50	34	9	0.73	1.06
11+00	40	9	0.74	1.35
11+50	35	9	0.66	1.49
12+00	31	9	0.60	1.29
12+50	25	9	0.50	1.41
13+00	36	9	0.86	1.36
13+50	0	0	0.00	0.00
14+00	0	0	0.00	0.00
14+50	0	0	0.00	0.00
15+00	0	0	0.00	0.00
15+50	0	0	0.00	0.00
16+00	0	0	0.00	0.00
16+50	4	47	0.25	0.75
17+00	9	3	0.27	0.76
17+50	18	3	0.29	0.78
18+00	23	3	0.32	0.79
18+50	27	3	0.30	0.78
19+00	24	3	0.27	0.76
19+56	25	4	0.25	0.75
20+00	0	0	0.00	0.00
20+50	0	0	0.00	0.00
21+00	0	0	0.00	0.00
21+50	0	0	0.00	0.00
22+00	0	0	0.00	0.00
22+50	0	0	0.00	0.00
23+00	0	0	0.00	0.00
23+50	0	0	0.00	0.00
24+00	0	0	0.00	0.00
24+50	0	0	0.00	0.00
25+00	0	0	0.00	0.00
25+50	0	0	0.00	0.00
26+00	0	0	0.00	0.00
26+50	0	0	0.00	0.00
27+00	0	0	0.00	0.00
27+50	0	0	0.00	0.00
CONTINUED AT RIGHT				

CUT AND FILL QUANTITIES				
STATION	CUT (C.Y.)	FILL (C.Y.)	LARGEST CUT (FT.)	LARGEST FILL (FT.)
S. WATER ST.	CONTINUED			
28+00	0	0	0.00	0.00
28+50	0	0	0.00	0.00
29+03	0	0	0.00	0.00
29+50	45	0	0.42	0.00
30+00	104	0	1.77	0.00
30+50	133	0	1.79	0.00
31+00	145	0	1.79	0.00
31+50	86	0	1.15	0.00
31+84	37	0	0.77	0.00
E. PITTSBURGH AVE. & N. BROADWAY				
02+00	0	0	0.00	0.00
02+50	4	0	0.33	0.00
03+00	2	0	0.33	0.00
06+50	3	0	0.36	0.00
07+00	3	0	0.32	0.00
07+50	199	0	0.67	0.00
08+00	18	0	0.67	0.00
GRAND TOTAL	1166	336		

EARTHWORK SUMMARY	
UNCLASSIFIED EXCAVATION	8,732 C.Y.
(INCLUDES C.Y. PAV'T. REMOVAL)	
FILL (INCLUDING 20% SHRINKAGE)	336 C.Y.
WASTE	8,396 C.Y.

Notes



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