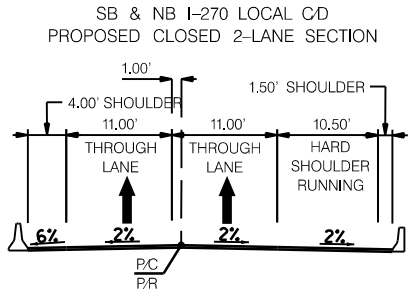
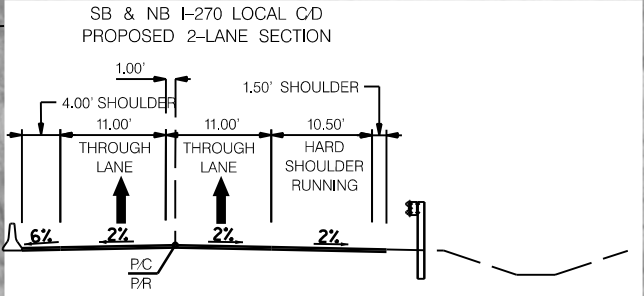


BORING DATA					
NO.	LOCATION	NORTHING	EASTING	BIT. CONCR. DEPTH (IN.)	STONE BASE (IN.)
SB-11	SB I-270 MAINLINE LEFT SHOULDER	504,453.57	1,268,996.93	12.0	28.8



NOTES:
1. NO GPR DATA AVAILABLE - SEE SHADING FOR LIMITS OF FULL DEPTH RESURFACING
2. RECORDS OF THE CD LANE RIGHT SHOULDER PAVEMENT SECTION INDICATE AT LEAST 5.0 INCHES OF HMA/BITUMINOUS CONCRETE & 9 INCHES OF GAB.
3. RECORDS OF THE MAINLINE RIGHT SHOULDER PAVEMENT SECTION INDICATE AT LEAST 6.0 INCHES OF HMA/BITUMINOUS CONCRETE & 15 INCHES OF GAB.

FULL DEPTH RECONSTRUCTION

WEDGE/LEVEL & RESURFACING

MICROSURFACING

LEGEND

PAVEMENT MARKINGS

W-BEAM TRAFFIC BARRIER

CONCRETE BARRIER

EXISTING GRATE INLET (ADJUST OR REPLACE)

EXISTING MANHOLE COVER (ADJUST OR REPLACE)

UTILITY CONFLICTS

- NONE ANTICIPATED

- POSSIBLE

- PROBABLE

DRAFT PLANS

SCALE: 1" = 100'

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

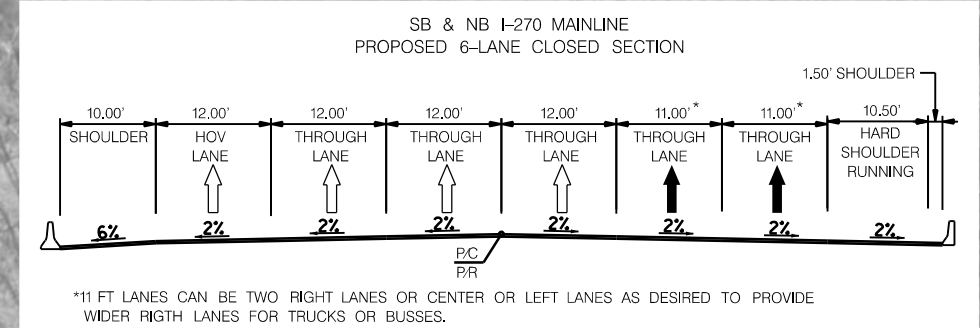
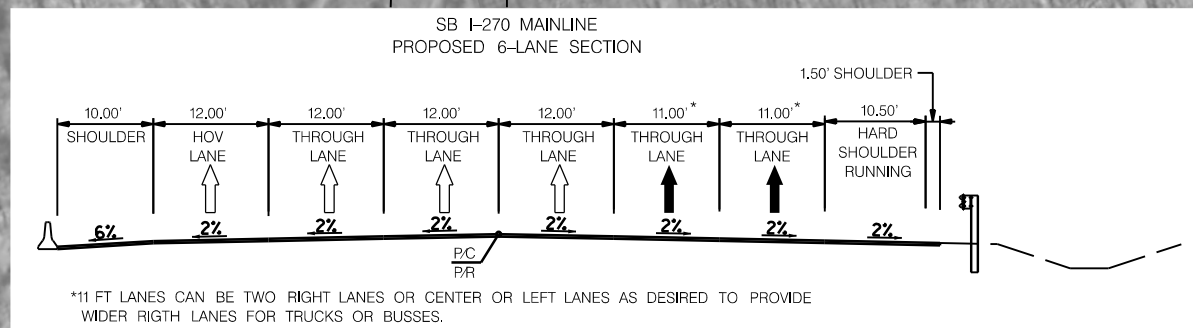
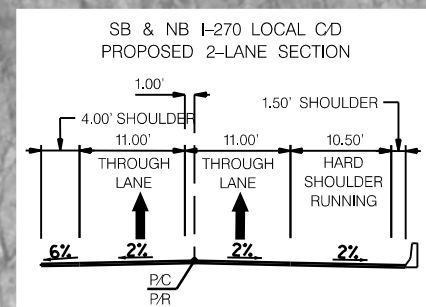
IS 270 INNOVATIVE CONGESTION MANAGEMENT

HARD SHOULDER RUNNING

SEGMENT 4
IS 270 - SOUTH OF MONTROSE RD

DATE: JANUARY 19, 2017

HSR 51 OF 57



NOTES:
1. NO GPR DATA AVAILABLE - SEE SHADING FOR LIMITS OF FULL DEPTH RESURFACING.
2. RECORDS OF THE MAINLINE RIGHT SHOULDER PAVEMENT SECTION INDICATE AT LEAST 6.0 INCHES OF HMA/BITUMINOUS CONCRETE & 15 INCHES OF GAB.

BY: hendersonst -



LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICROSURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS

50' 0 50' 100'

SCALE: 1" = 100'

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

IS 270 INNOVATIVE CONGESTION MANAGEMENT

HARD SHOULDER RUNNING

SEGMENT 4
IS 270 - SOUTH OF MONTROSE RD

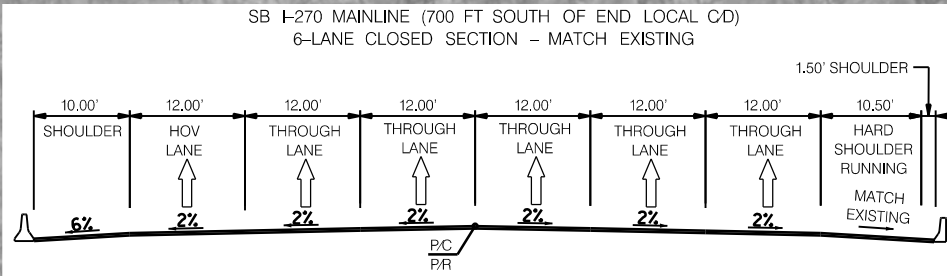
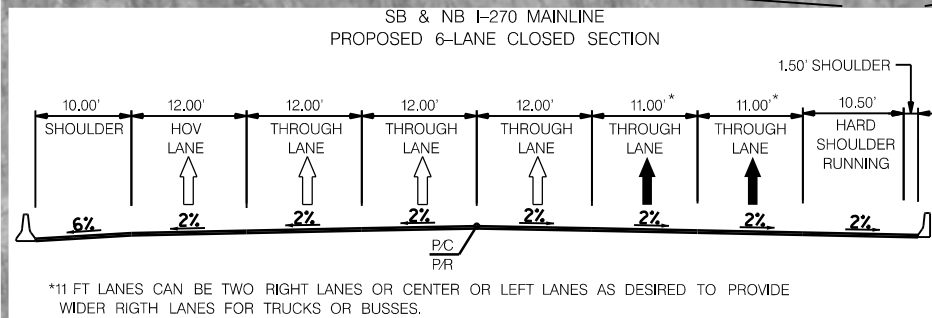
DATE: JANUARY 19, 2017

HSR 52 OF 57

PLOTTED: Tuesday, January 17, 2017 AT 09:54 AM
FILE: J:\2015\0144 - I-270 ATM\Tech Proposal\Concepts\Hard Shoulder Running\Plan Sheets\p40-P052_I6270.dgn



BORING DATA					
NO.	LOCATION	NORTHING	EASTING	BIT. CONCR. DEPTH (IN.)	STONE BASE (IN.)
SB-22	SB I-270 MAINLINE RIGHT SHOULDER	501,935.12	1,269,863.09	9.6	15.6
SB-26	NB I-270 MAINLINE RIGHT SHOULDER	501,388.11	1,270,281.07	8.4	15.6



NOTES:
1. NO GPR DATA AVAILABLE - SEE SHADING FOR LIMITS OF FULL DEPTH RESURFACING.
2. RECORDS OF THE MAINLINE RIGHT SHOULDER PAVEMENT SECTION INDICATE AT LEAST 6.0 INCHES OF HMA/BITUMINOUS CONCRETE & 15 INCHES OF GAB.



LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICROSURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

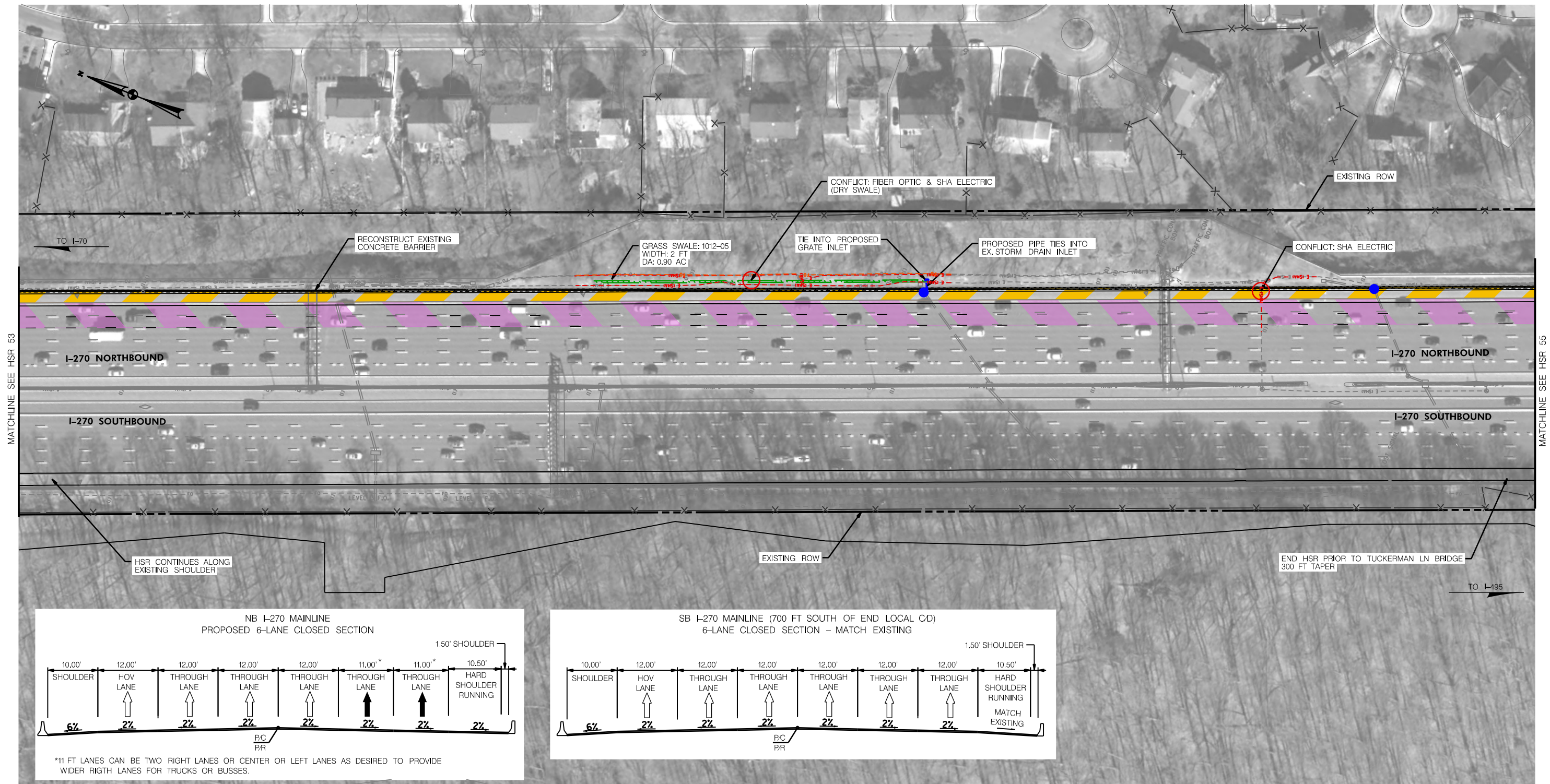
IS 270 INNOVATIVE CONGESTION MANAGEMENT

HARD SHOULDER RUNNING

SEGMENT 5
IS 270 - SOUTH OF MONTROSE RD

DATE: JANUARY 19, 2017

HSR 53 OF 57



NOTES:

1. GPR DATA AVAILABLE - SEE SHADING FOR LIMITS OF FULL DEPTH RESURFACING.

2. RECORDS OF THE RIGHT SHOULDER PAVEMENT SECTION INDICATE AT LEAST 6.0 INCHES OF HMA/BITUMINOUS CONCRETE & 15 INCHES GAB.

CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

FULL DEPTH RECONSTRUCTION



WEDGE/LEVEL & RESURFACING

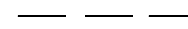


MICROSURFACING



LEGEND

PAVEMENT MARKINGS



W-BEAM TRAFFIC BARRIER



CONCRETE BARRIER



EXISTING GRATE INLET
(ADJUST OR REPLACE)



EXISTING MANHOLE COVER
(ADJUST OR REPLACE)



UTILITY CONFLICTS



- NONE ANTICIPATED



- POSSIBLE



- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

IS 270 INNOVATIVE CONGESTION MANAGEMENT

HARD SHOULDER RUNNING

SEGMENT 5
IS 270 - TUCKERMAN LANE

DATE: JANUARY 19, 2017 HSR 54 OF 57

PLOTTED: Wednesday, January 18, 2017 AT 07:34 AM
FILE: J:\2015\0144 - I-270 ATM\Tech Proposal\Concepts\Hard Shoulder Running\Plan Sheets\p4D-P054_I6270.dgn

MATCHLINE SEE HSR 57



- NOTES:
1. GPR DATA AVAILABLE - SEE SHADING FOR LIMITS OF FULL DEPTH RESURFACING.
 2. RECORDS OF THE RIGHT SHOULDER PAVEMENT SECTION INDICATE AT LEAST 12.0 INCHES OF HMA/BITUMINOUS CONCRETE & 15 INCHES GAB (IS 270).

CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

FULL DEPTH RECONSTRUCTION



WEDGE/LEVEL & RESURFACING

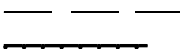


MICROSURFACING



LEGEND

PAVEMENT MARKINGS



W-BEAM TRAFFIC BARRIER



CONCRETE BARRIER



EXISTING GRATE INLET
(ADJUST OR REPLACE)



EXISTING MANHOLE COVER
(ADJUST OR REPLACE)



UTILITY CONFLICTS



- NONE ANTICIPATED



- POSSIBLE



- PROBABLE

DRAFT PLANS

50' 0 50' 100'
SCALE: 1" = 100'

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

IS 270 INNOVATIVE CONGESTION MANAGEMENT

HARD SHOULDER RUNNING

SEGMENT 5
IS 270 - IS 270 SPURS

DATE: JANUARY 19, 2017

HSR 56 OF 57

PLOTTED: Tuesday, January 17, 2017 AT 10:15 AM
FILE: J:\2015\0144 - I-270 ATM\Tech Proposal\Concepts\Hard Shoulder Running\Plan Sheets\p40-P056_IS270.dgn



BORING DATA					
NO.	LOCATION	NORTHING	EASTING	BIT. CONCR. DEPTH (IN.)	STONE BASE (IN.)
SB-19	NB I-270 MAINLINE RIGHT SHOULDER	497,705.81	1,272,593.28	12.0	20.4
SB-21	SB I-270 MAINLINE RIGHT SHOULDER	497,392.87	1,272,962.12	9.6	15.6

NOTES:
1. NO GPR DATA AVAILABLE (LIMITS BEGIN AT MIDDLEBROOK RD)
2. RECORDS OF THE RIGHT SHOULDER PAVEMENT SECTION INDICATE AT LEAST 12.0 INCHES OF HMA/BITUMINOUS CONCRETE & 15 INCHES OF GAB.

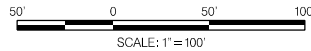
CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICROSURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	


UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

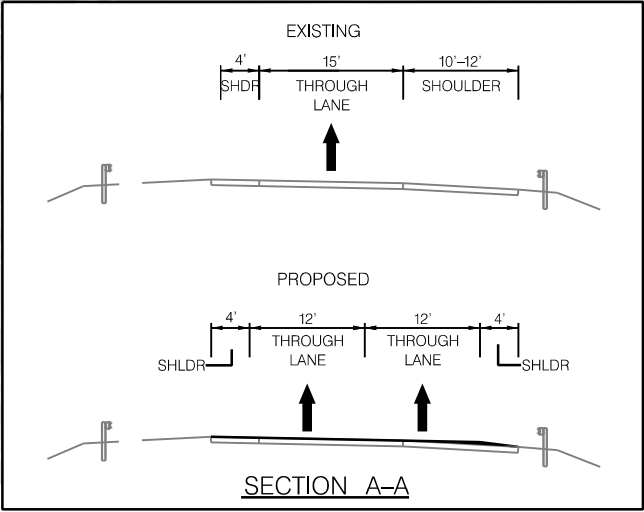
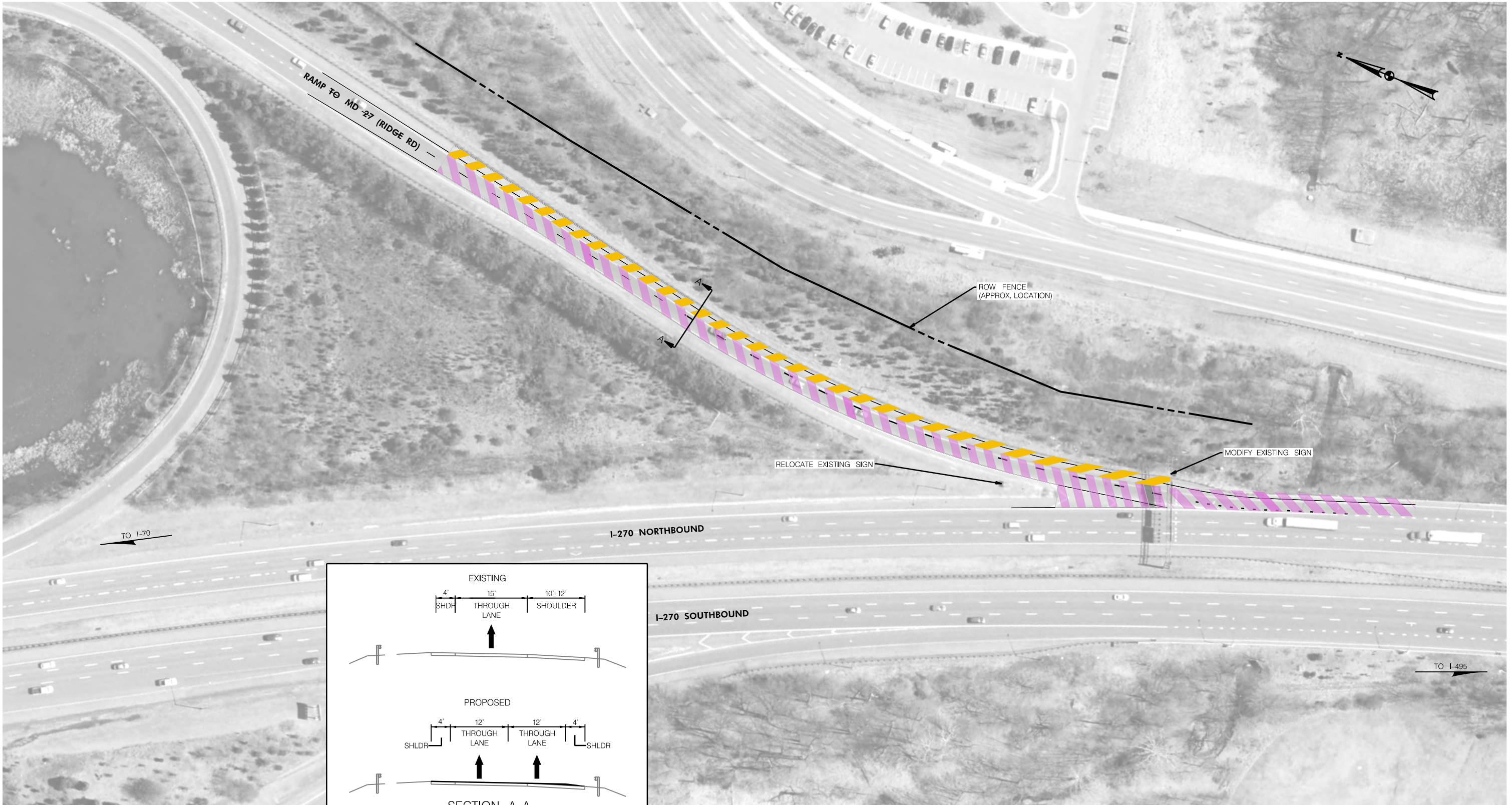
IS 270 INNOVATIVE CONGESTION MANAGEMENT

HARD SHOULDER RUNNING

SEGMENT 5
IS 270 - IS 270 SPURS

DATE: JANUARY 19, 2017

HSR 57 OF 57

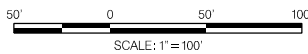


CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	
UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

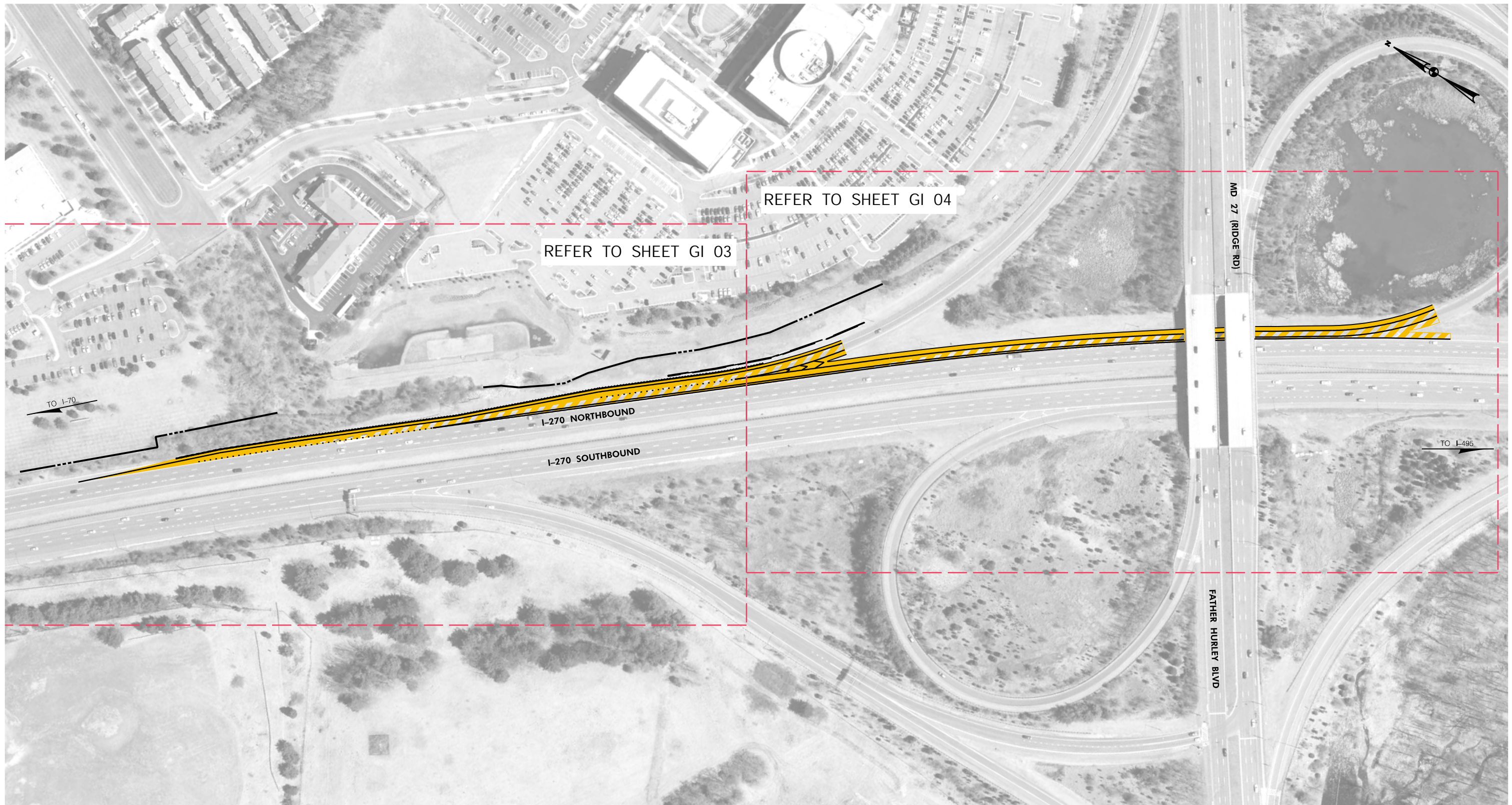
IS-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

NB EXIT RAMP TO MD 27 (RIDGE RD)

DATE: JANUARY 19, 2017

GI 01 OF 41

PLOTTED: Tuesday, January 17, 2017 AT 09:39 AM
FILE: \\arbit\002\jobs_agreements\2015\0144 - I-270 ATM\Tech Proposals\Concepts\Spot Improvements\PTC03B\pHD-P001_PTC 03B NB 01 to MD27.dgn



CORMAN
CONSTRUCTION

WSP | **PARSONS
BRINCKERHOFF**

FULL DEPTH RECONSTRUCTION



WEDGE/LEVEL & RESURFACING

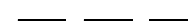


MICRO-SURFACING



LEGEND

PAVEMENT MARKINGS



W-BEAM TRAFFIC BARRIER



CONCRETE BARRIER



EXISTING GRATE INLET
(ADJUST OR REPLACE)



EXISTING MANHOLE COVER
(ADJUST OR REPLACE)



UTILITY CONFLICTS

— NONE
— ANTICIPATED

— POSSIBLE

— PROBABLE

DRAFT PLANS

100' 0 100' 200'
SCALE: 1" = 200'

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

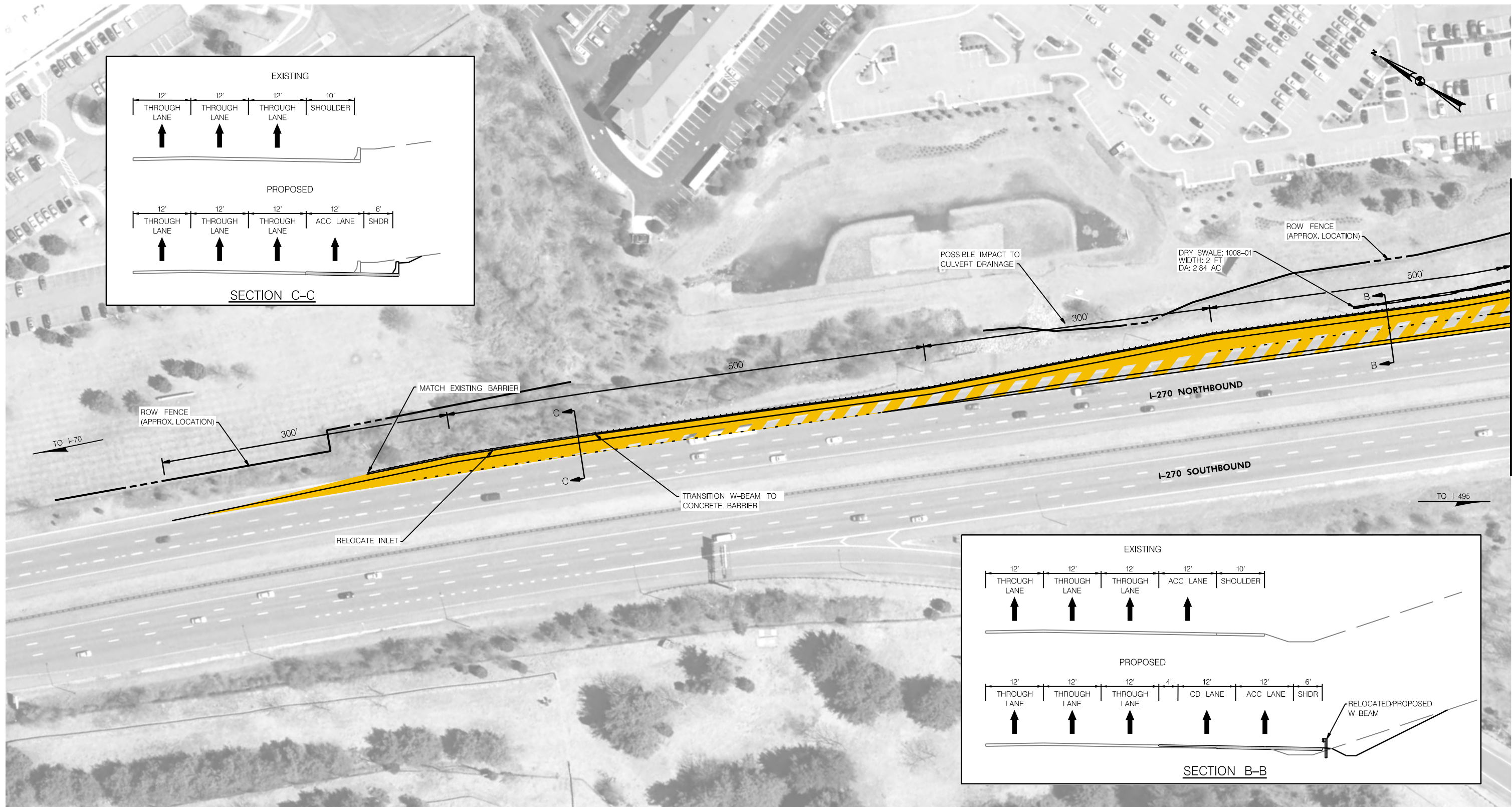
IS-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

FATHER HURLEY BLVD
COMBINED NB ENTRANCE RAMP
MERGE AREA LAYOUT

DATE: JANUARY 19, 2017

GI 02 OF 41

PLOTTED: Tuesday, January 17, 2017 AT 03:25 PM
FILE: J:\2015\0144 - I-270 ATM\Tech Proposal\Concepts\SpotImprovements\PTC07\pH-D-P000_PTC 07 NB Poor Man CD.dgn



CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

FULL DEPTH RECONSTRUCTION



WEDGE/LEVEL & RESURFACING

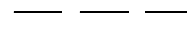


MICRO-SURFACING



LEGEND

PAVEMENT MARKINGS



W-BEAM TRAFFIC BARRIER



CONCRETE BARRIER



EXISTING GRATE INLET (ADJUST OR REPLACE)



EXISTING MANHOLE COVER (ADJUST OR REPLACE)



UTILITY CONFLICTS



- NONE ANTICIPATED



- POSSIBLE



- PROBABLE

DRAFT PLANS

50' 0 50' 100'
SCALE: 1" = 100'

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

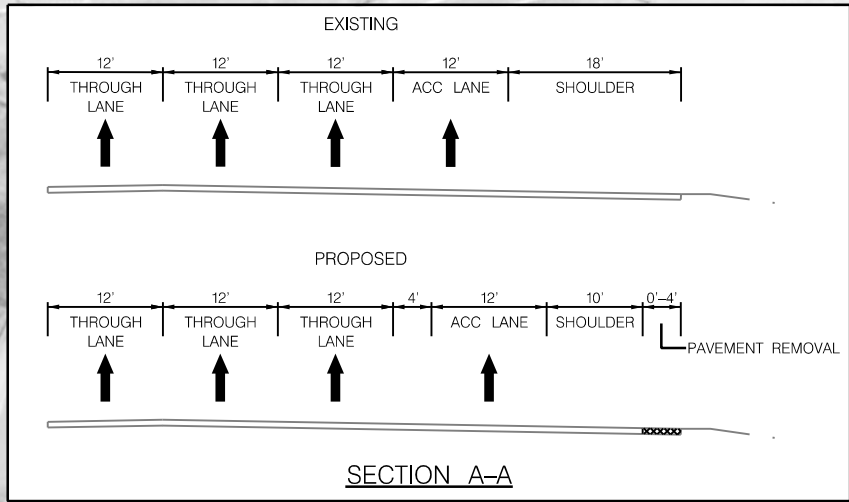
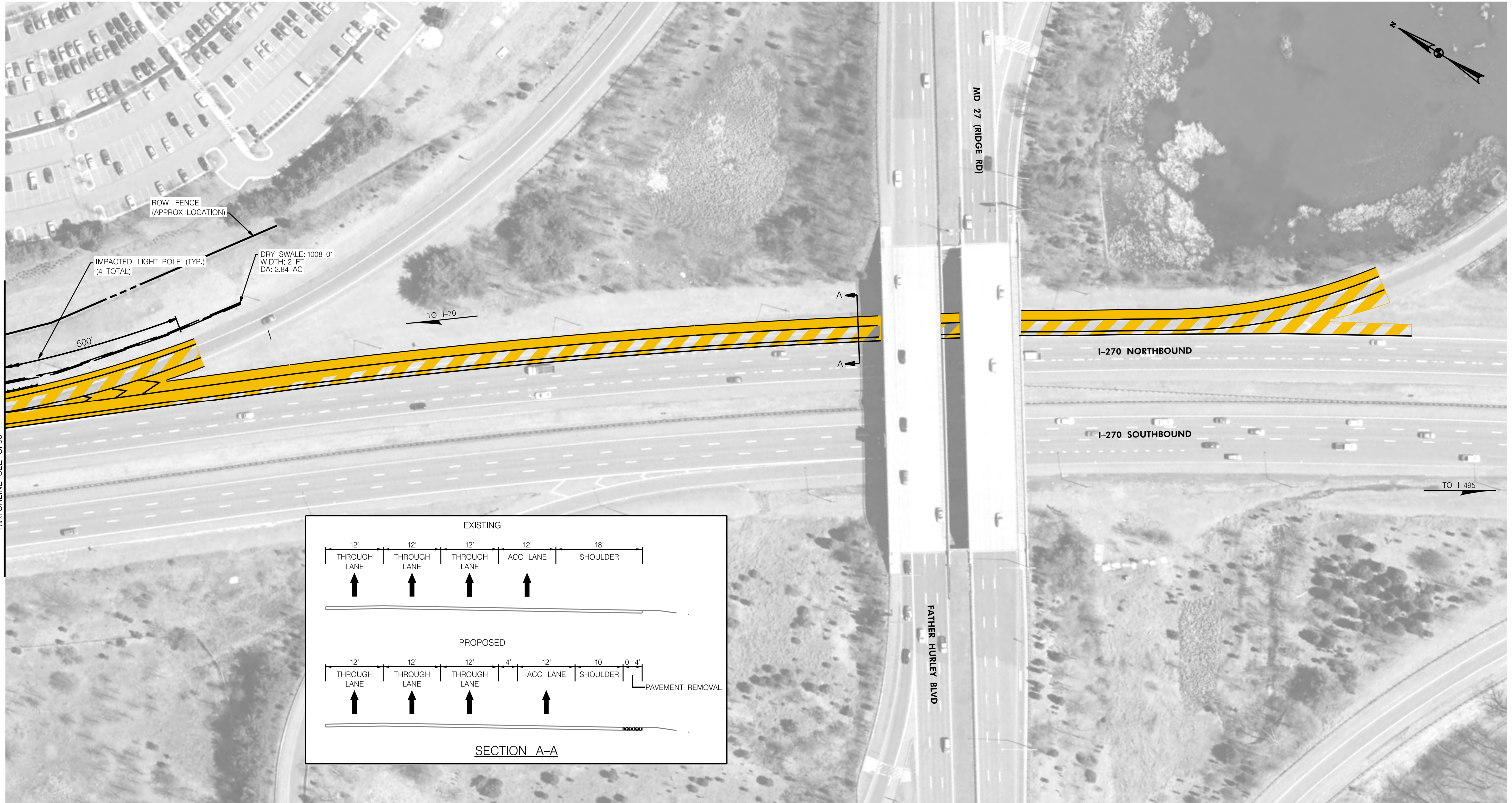
IS-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

FATHER HURLEY BLVD
COMBINED NB ENTRANCE RAMP MERGE AREA

DATE: JANUARY 19, 2017

GI 03 OF 41

PLOTTED: Tuesday, January 17, 2017 AT 09:44 AM
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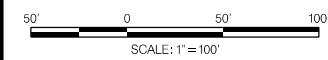
CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

IS-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

FATHER HURLEY BLVD
COMBINED NB ENTRANCE RAMP MERGE AREA

DATE: JANUARY 19, 2017

GI 04 OF 41



CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

FULL DEPTH RECONSTRUCTION



WEDGE/LEVEL & RESURFACING

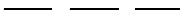


MICRO-SURFACING



LEGEND

PAVEMENT MARKINGS



W-BEAM TRAFFIC BARRIER



CONCRETE BARRIER



EXISTING GRATE INLET
(ADJUST OR REPLACE)



EXISTING MANHOLE COVER
(ADJUST OR REPLACE)



UTILITY CONFLICTS



- NONE
ANTICIPATED

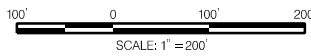


- POSSIBLE



- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS



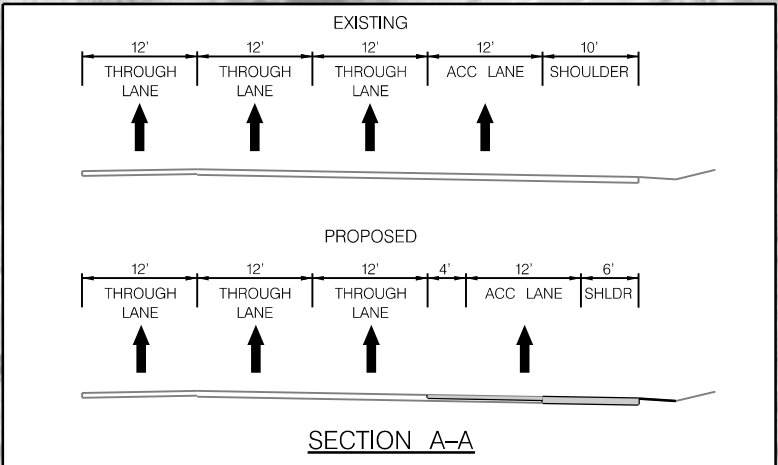
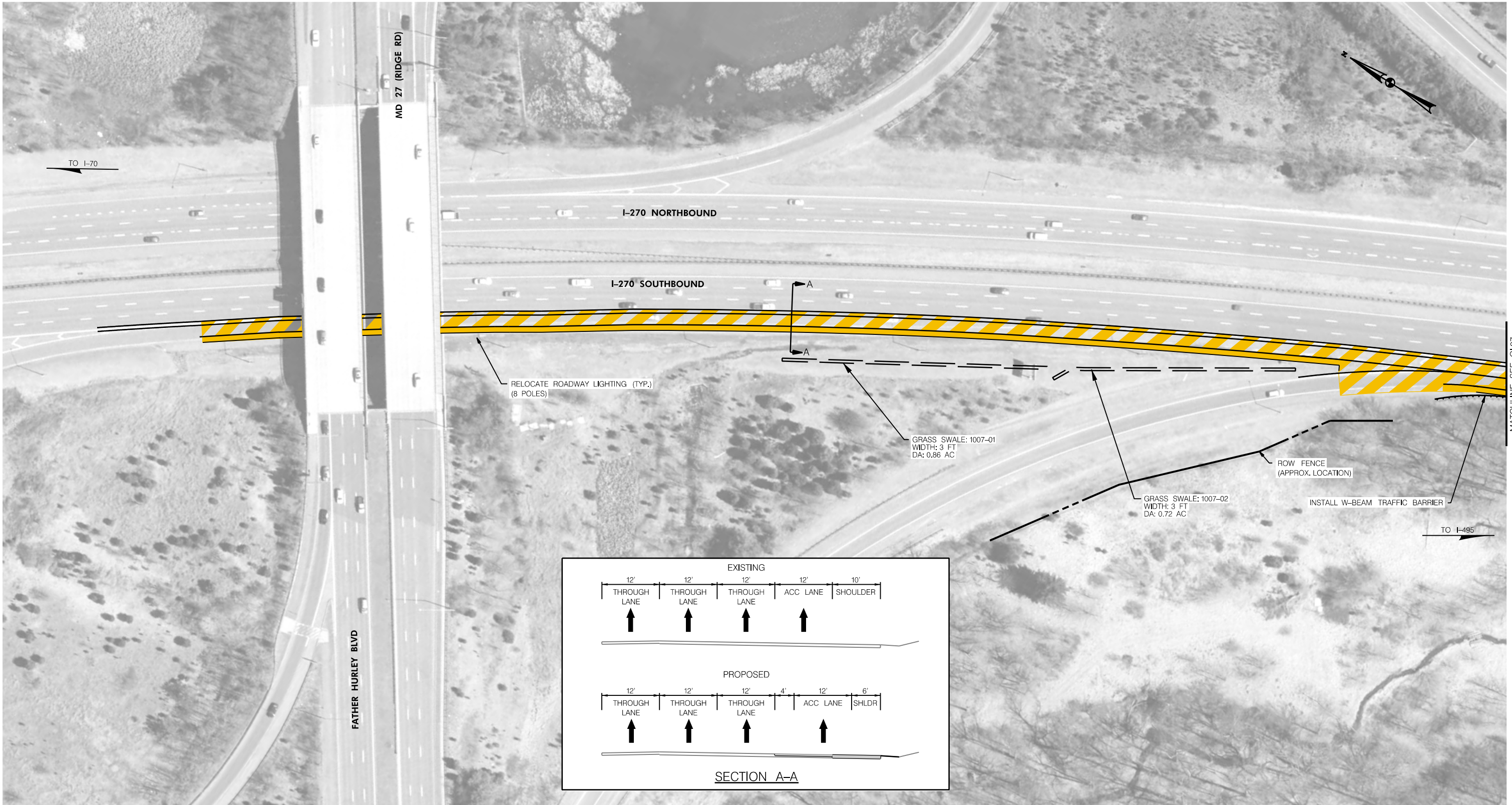
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

IS-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

FATHER HURLEY BLVD
COMBINED SB ENTRANCE RAMP
MERGE AREA LAYOUT

DATE: JANUARY 19, 2017

GI 05 OF 41



CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

FULL DEPTH RECONSTRUCTION



WEDGE/LEVEL & RESURFACING

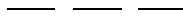


MICRO-SURFACING



LEGEND

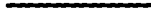
PAVEMENT MARKINGS



W-BEAM TRAFFIC BARRIER



CONCRETE BARRIER



EXISTING GRATE INLET
(ADJUST OR REPLACE)



EXISTING MANHOLE COVER
(ADJUST OR REPLACE)



UTILITY CONFLICTS



- NONE ANTICIPATED

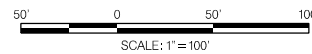


- POSSIBLE



- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS



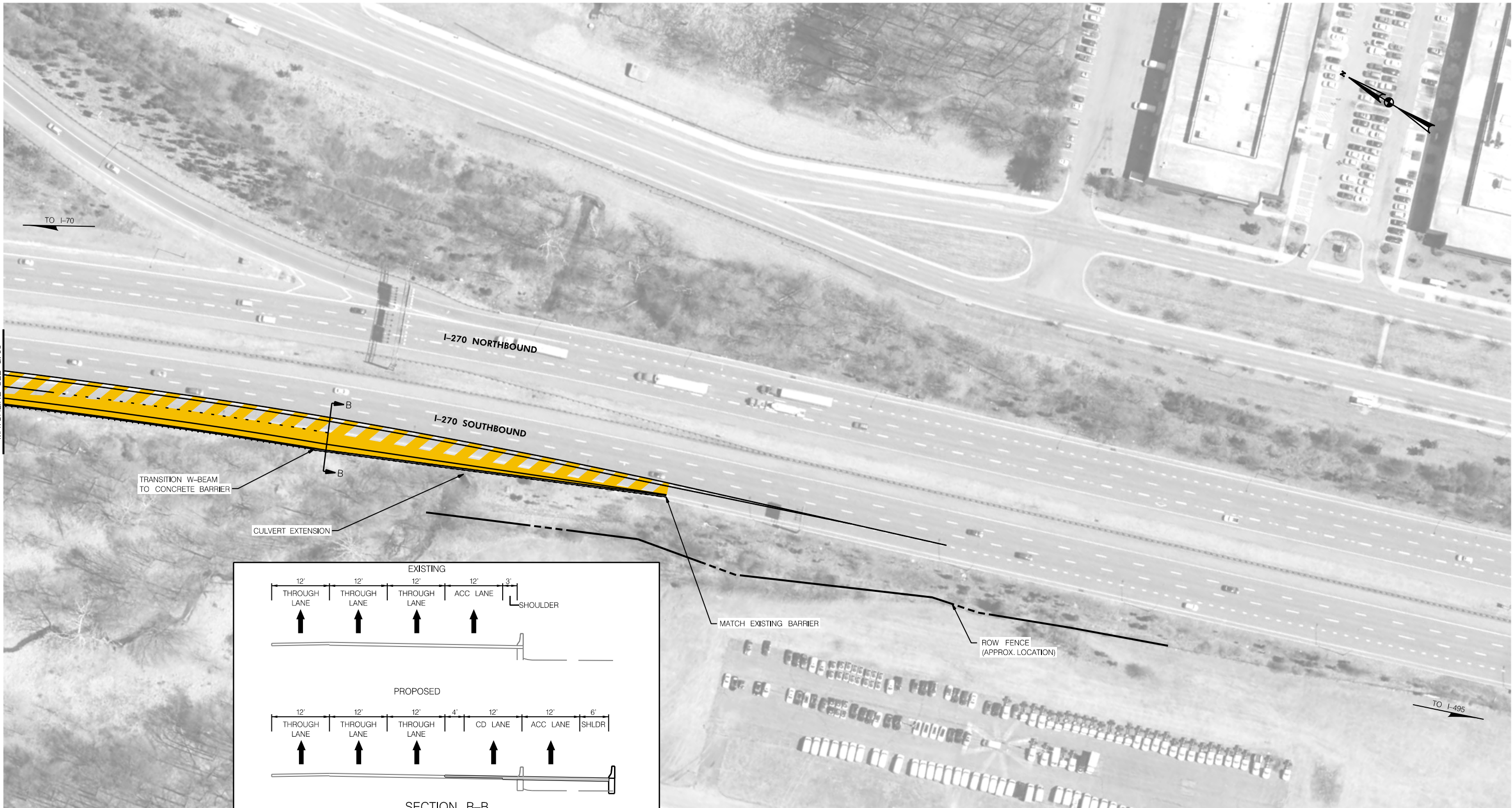
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

IS-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS









FATHER HURLEY BLVD
COMBINED SB ENTRANCE RAMP MERGE AREA




DATE: JANUARY 19, 2017

GI 06 OF 41

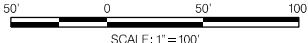




LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE


DRAFT PLANS



SCALE: 1" = 100'

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

IS-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

FATHER HURLEY BLVD
COMBINED SB ENTRANCE RAMP MERGE AREA

DATE: JANUARY 19, 2017

GI 07 OF 41



CORMAN
CONSTRUCTION

WSP | **PARSONS
BRINCKERHOFF**

FULL DEPTH RECONSTRUCTION



WEDGE/LEVEL & RESURFACING

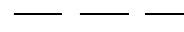


MICRO-SURFACING



LEGEND

PAVEMENT MARKINGS



W-BEAM TRAFFIC BARRIER



CONCRETE BARRIER



EXISTING GRATE INLET
(ADJUST OR REPLACE)



EXISTING MANHOLE COVER
(ADJUST OR REPLACE)



UTILITY CONFLICTS

○ NONE
- ANTICIPATED

○ POSSIBLE

○ PROBABLE

DRAFT PLANS

100' 0 100' 200'
SCALE: 1" = 200'

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

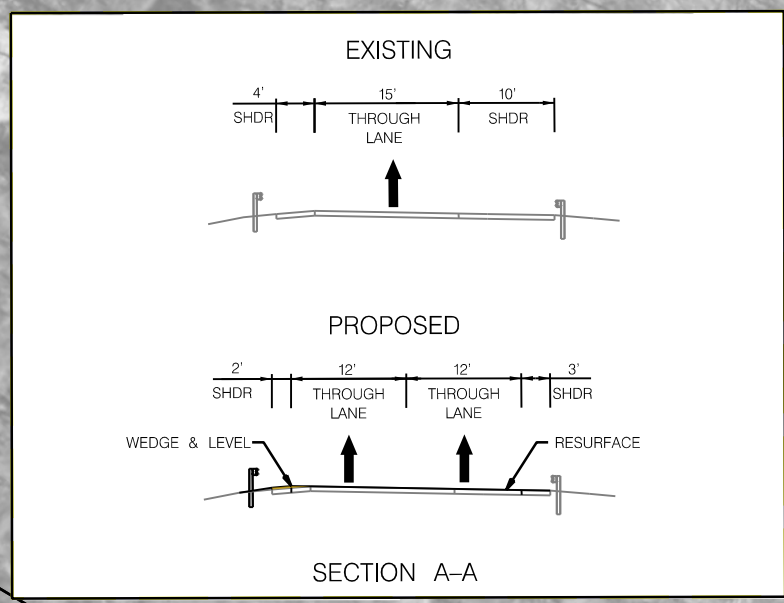
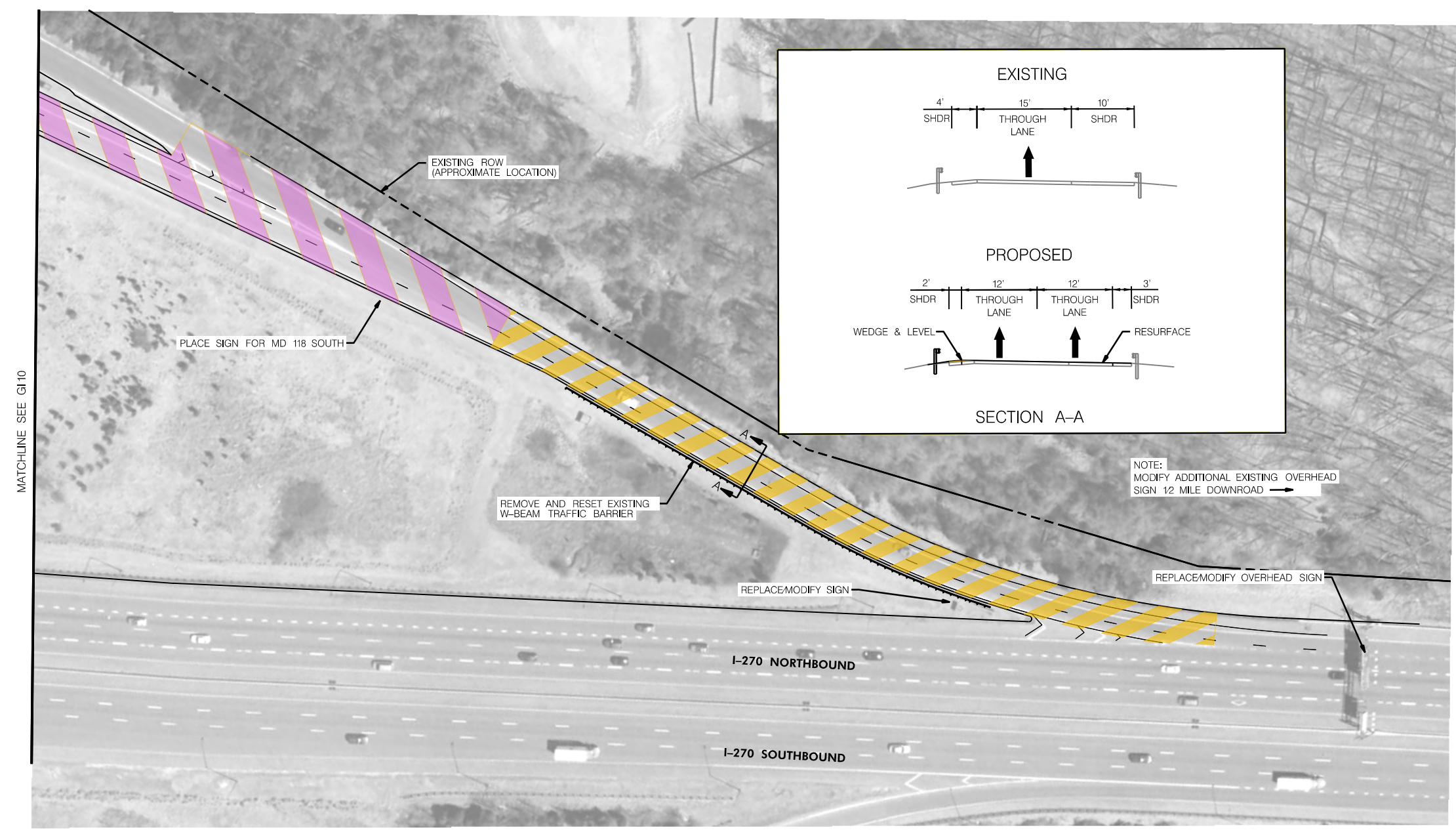
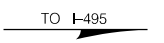
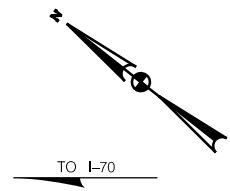
IS-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

MD 118 (GERMANTOWN RD)
ELIMINATE LOOP RAMP LAYOUT

DATE: JANUARY 19, 2017

GI 08 OF 41

PLOTTED: Tuesday, January 17, 2017 AT 03:28 PM
FILE: J:\2015\0144 - I-270 ATM\Tech Proposal\Concepts\Spot Improvements\PTC09 MD 118\pHC-P001_PTC09.dgn



NOTE:
MODIFY ADDITIONAL EXISTING OVERHEAD
SIGN 12 MILE DOWNROAD →



LEGEND			
FULL DEPTH RECONSTRUCTION		PAVEMENT MARKINGS	
WEDGE/LEVEL & RESURFACING		W-BEAM TRAFFIC BARRIER	
MICRO-SURFACING		CONCRETE BARRIER	
		EXISTING GRATE INLET (ADJUST OR REPLACE)	
		EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

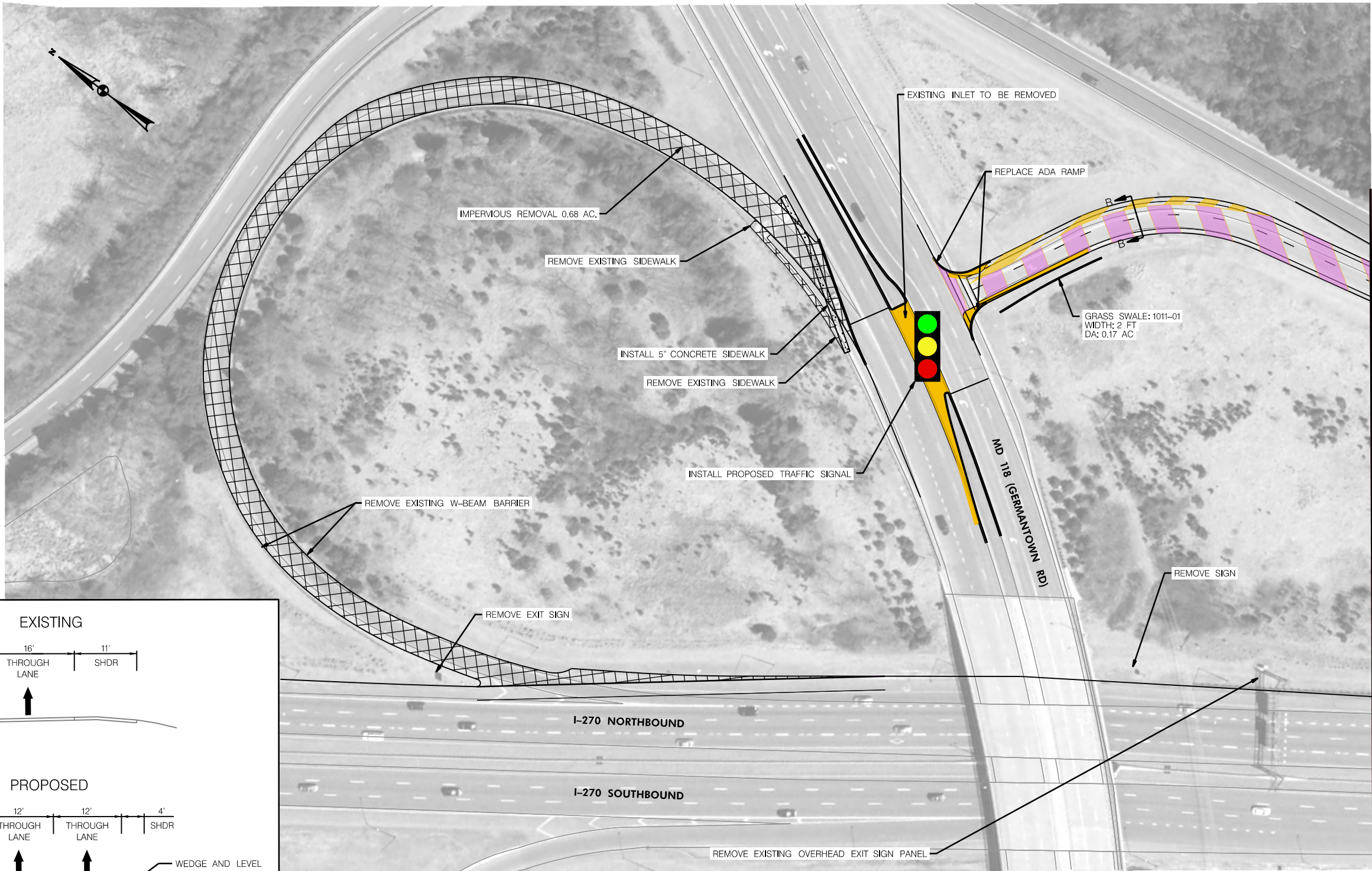
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

IS-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

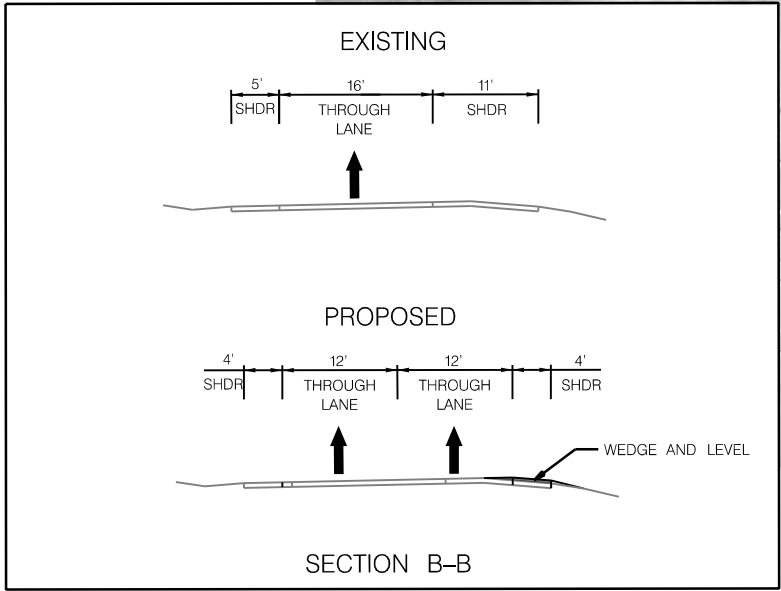
MD 118 (GERMANTOWN RD)
ELIMINATE LOOP RAMP

DATE: JANUARY 19, 2017

GI 09 OF 41



MATCHLINE SEE GI 09

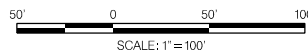


CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**


LEGEND		
FULL DEPTH RECONSTRUCTION		PAVEMENT MARKINGS
WEDGE/LEVEL & RESURFACING		W-BEAM TRAFFIC BARRIER
MICRO-SURFACING		CONCRETE BARRIER
		EXISTING GRATE INLET (ADJUST OR REPLACE)
		EXISTING MANHOLE COVER (ADJUST OR REPLACE)
		UTILITY CONFLICTS
		- NONE ANTICIPATED
		- POSSIBLE
		- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS



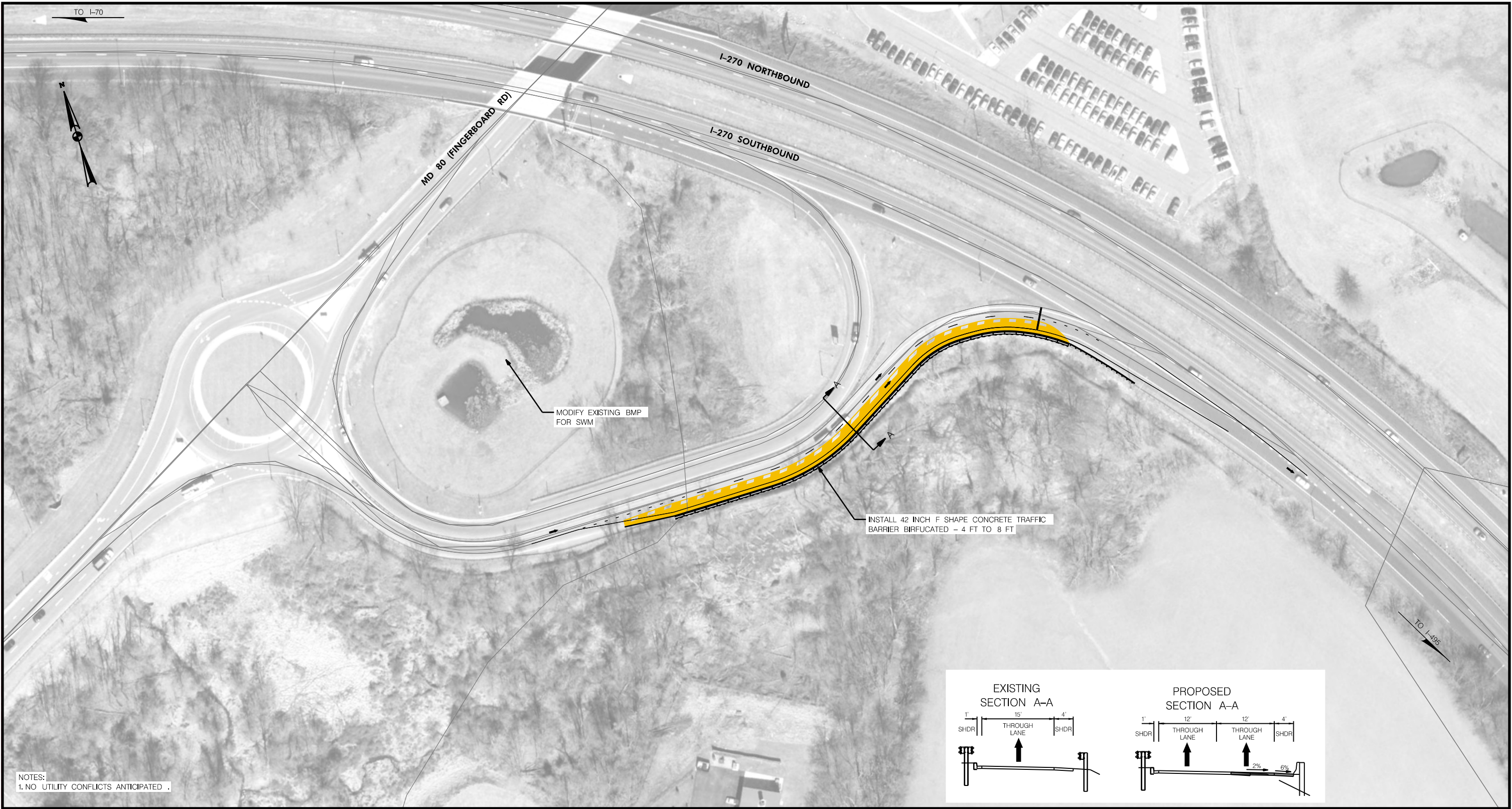
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

IS-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

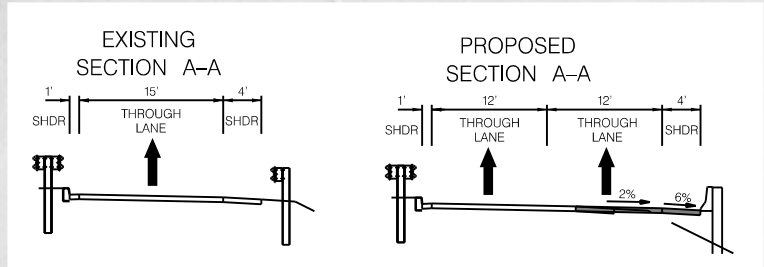
MD 118 (GERMANTOWN RD)
ELIMINATE LOOP RAMP

DATE: JANUARY 19, 2017

GI 10 OF 41



NOTES:
1. NO UTILITY CONFLICTS ANTICIPATED .



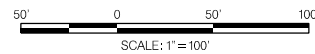
CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

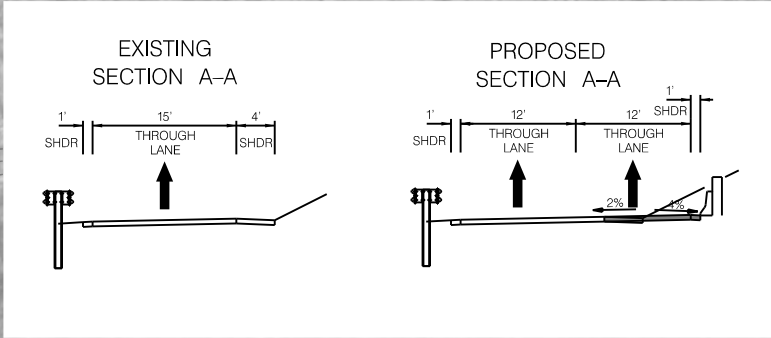
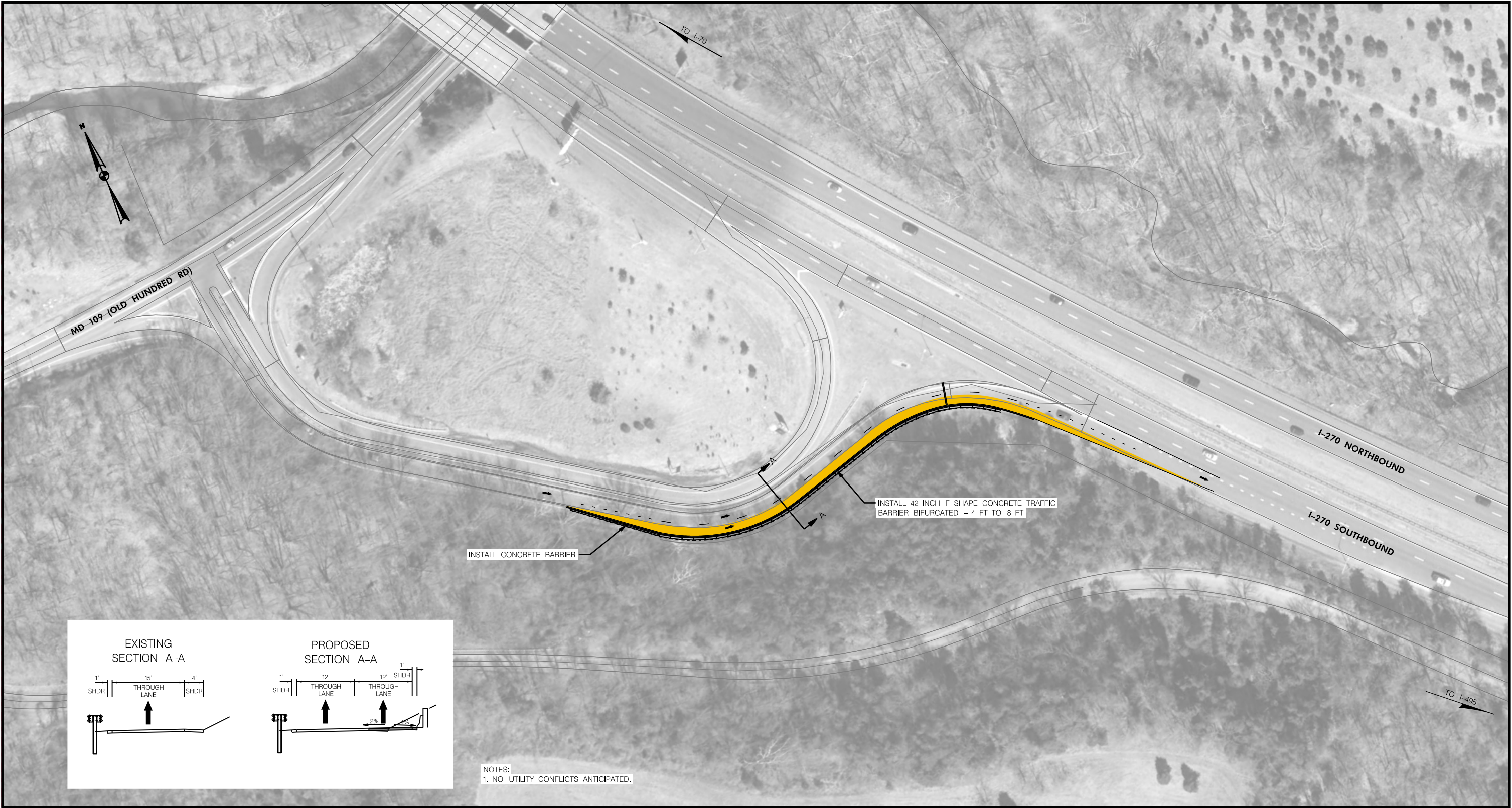
I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

SOUTHBOUND RAMP IMPROVEMENTS
MD 80 (FINGERBOARD RD) OUTER RAMP

DATE: JANUARY 19, 2017

GI 11 OF 41

PLOTTED: Tuesday, January 17, 2017 AT 07:23 AM
FILE: \\arbit01002\jobs_agreements\2015\0144 - I-270 ATM\Tech Proposals\Concepts\Ramp Metering\Geometric Improvements\Southbound\pH-D-0001_SB_MD80.dgn



NOTES:
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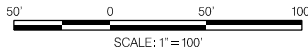
CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

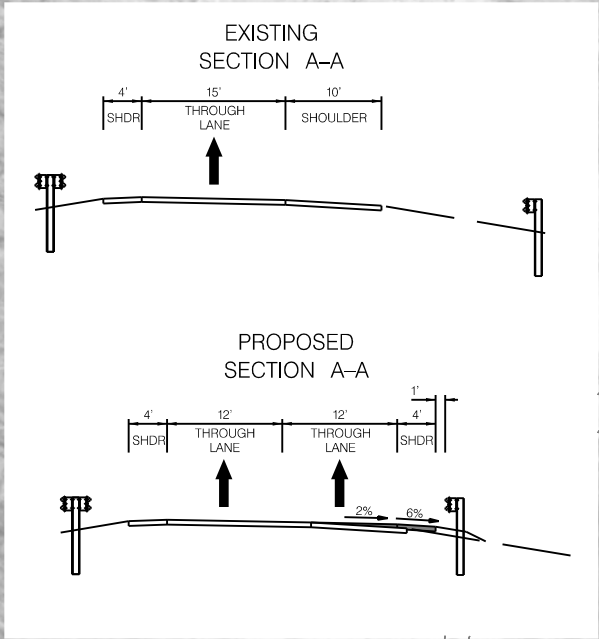
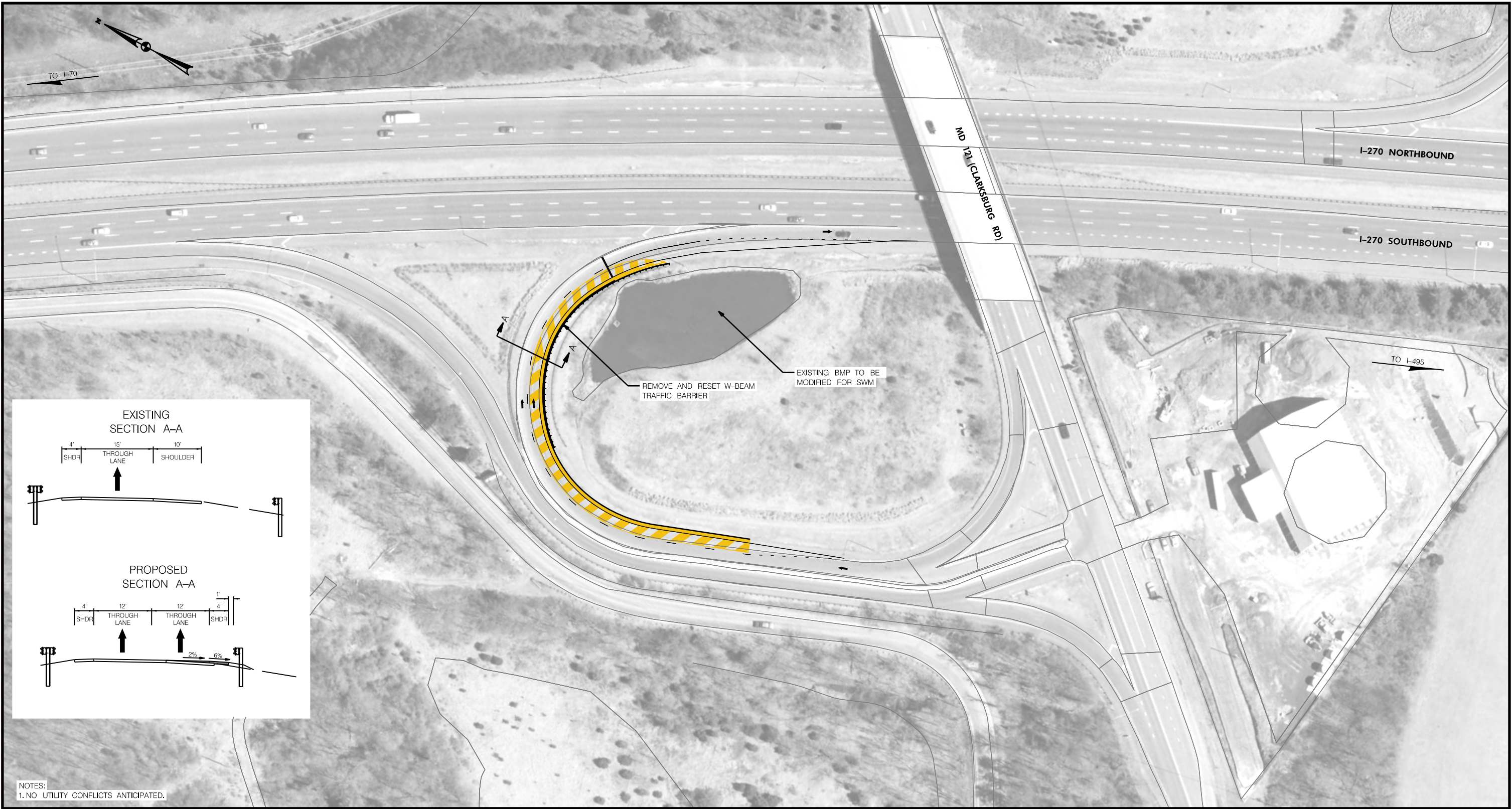
SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

SOUTHBOUND RAMP IMPROVEMENTS
MD 109 (OLD HUNDRED RD) OUTER RAMP

DATE: JANUARY 19, 2017

GI 12 OF 41



NOTES:
1. NO UTILITY CONFLICTS ANTICIPATED.



LEGEND		
FULL DEPTH RECONSTRUCTION		PAVEMENT MARKINGS
WEDGE/LEVEL & RESURFACING		W-BEAM TRAFFIC BARRIER
MICRO-SURFACING		CONCRETE BARRIER
		EXISTING GRATE INLET (ADJUST OR REPLACE)
		EXISTING MANHOLE COVER (ADJUST OR REPLACE)
		UTILITY CONFLICTS
		- NONE ANTICIPATED
		- POSSIBLE
		- PROBABLE

DRAFT PLANS

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

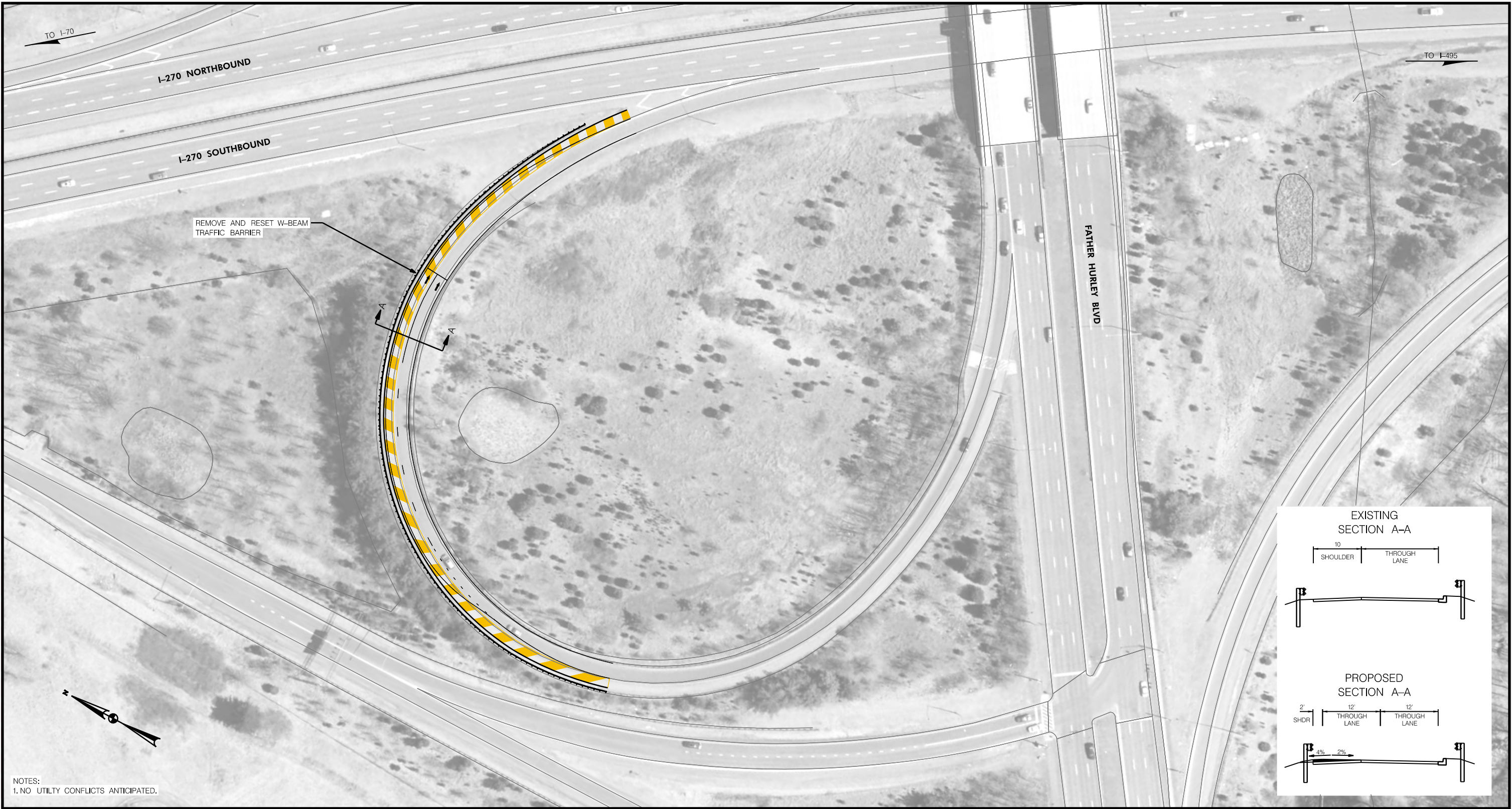
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

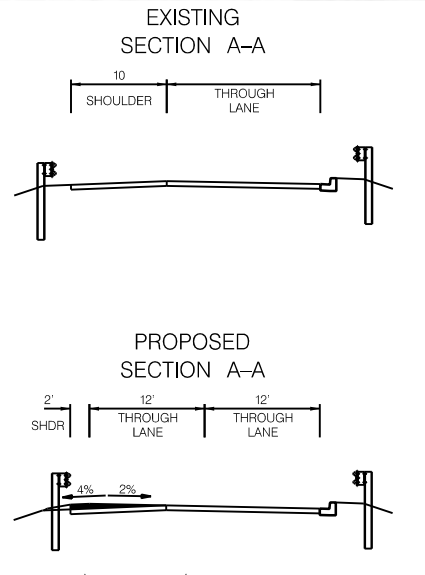
SOUTHBOUND RAMP IMPROVEMENTS
MD 121 (CLARKSBURG RD) LOOP RAMP

DATE: JANUARY 19, 2017

GI 13 OF 41



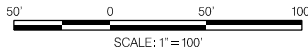
NOTES:
1. NO UTILITY CONFLICTS ANTICIPATED.



LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

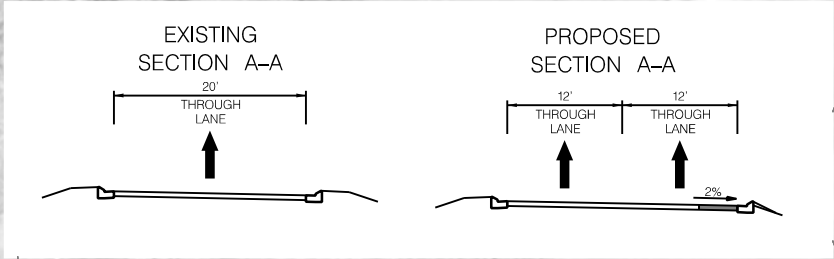


I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

SOUTHBOUND RAMP IMPROVEMENTS
FATHER HURLEY BLVD LOOP RAMP

DATE: JANUARY 19, 2017

GI 14 OF 41



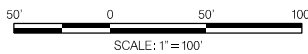
CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

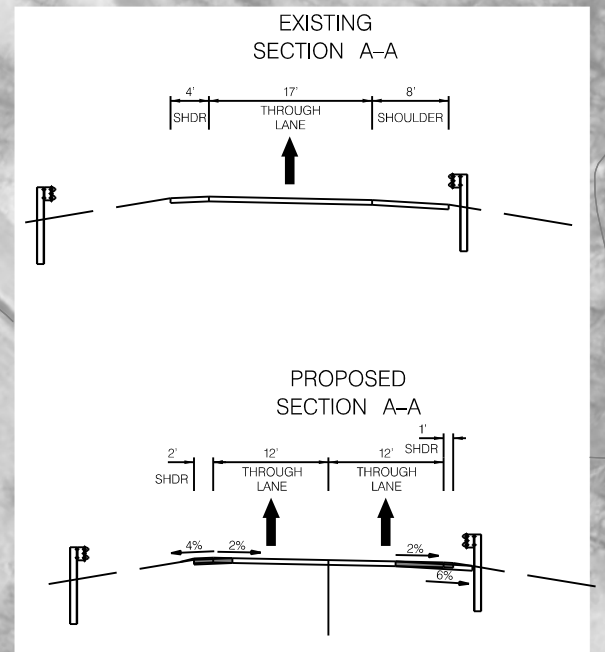
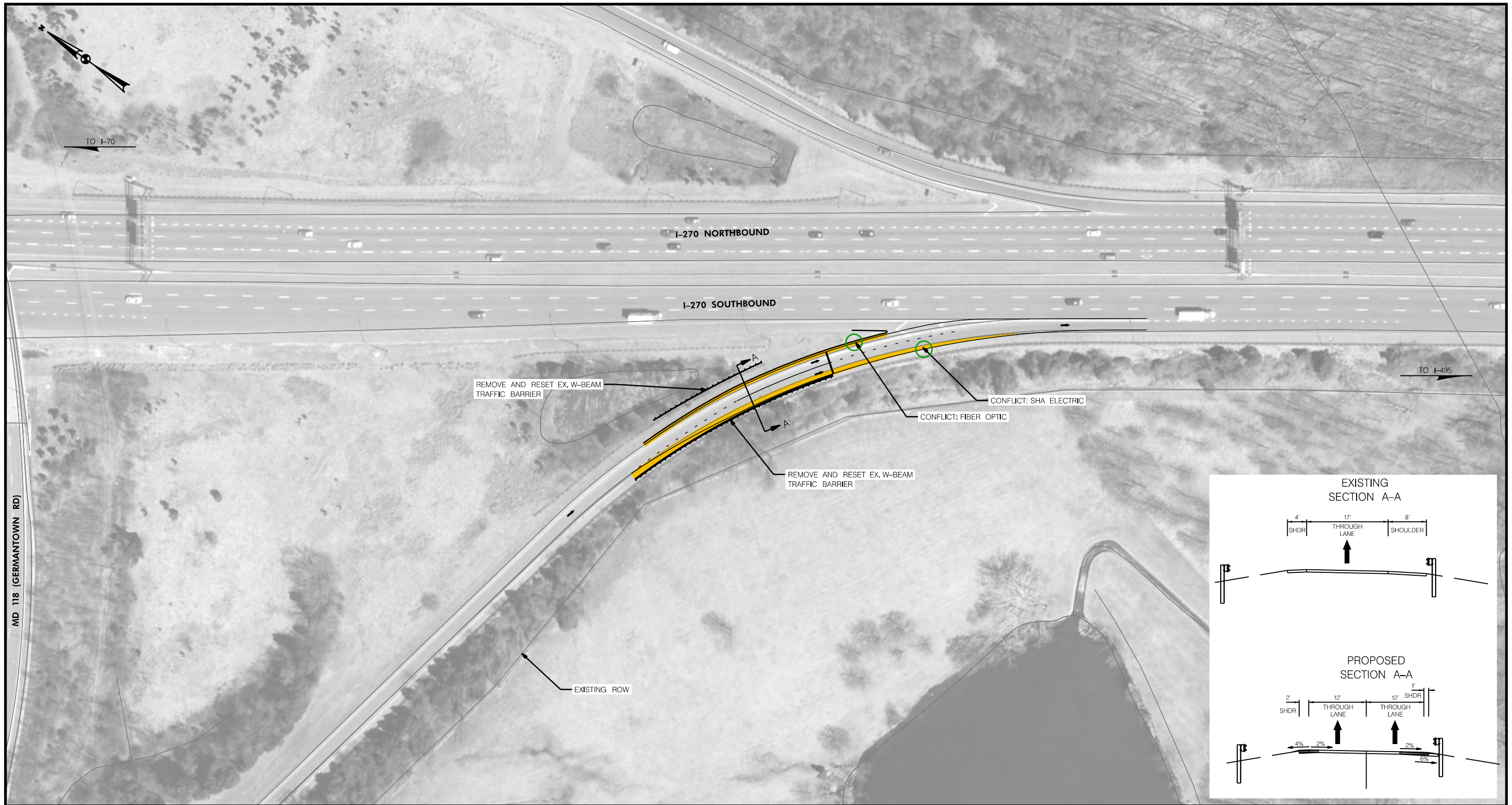
I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

SOUTHBOUND RAMP IMPROVEMENTS
MD 118 (GERMANTOWN RD) LOOP RAMP

DATE: JANUARY 19, 2017

GI 15 OF 41

PLOTTED: Tuesday, January 17, 2017 AT 07:32 AM
FILE: \\arbit\002\jobs_agreements\2015\0144 - I-270 ATM\Tech Proposals\Concepts\Ramp_Meeting\Geometric Improvements\Southbound\pHD-0005_SB_MD118_Loop.dgn



CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

FULL DEPTH RECONSTRUCTION



WEDGE/LEVEL & RESURFACING

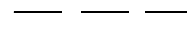


MICRO-SURFACING



LEGEND

PAVEMENT MARKINGS



W-BEAM TRAFFIC BARRIER



CONCRETE BARRIER



EXISTING GRATE INLET
(ADJUST OR REPLACE)



EXISTING MANHOLE COVER
(ADJUST OR REPLACE)



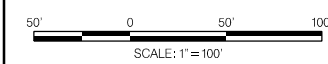
UTILITY CONFLICTS

○ - NONE ANTICIPATED

○ - POSSIBLE

○ - PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

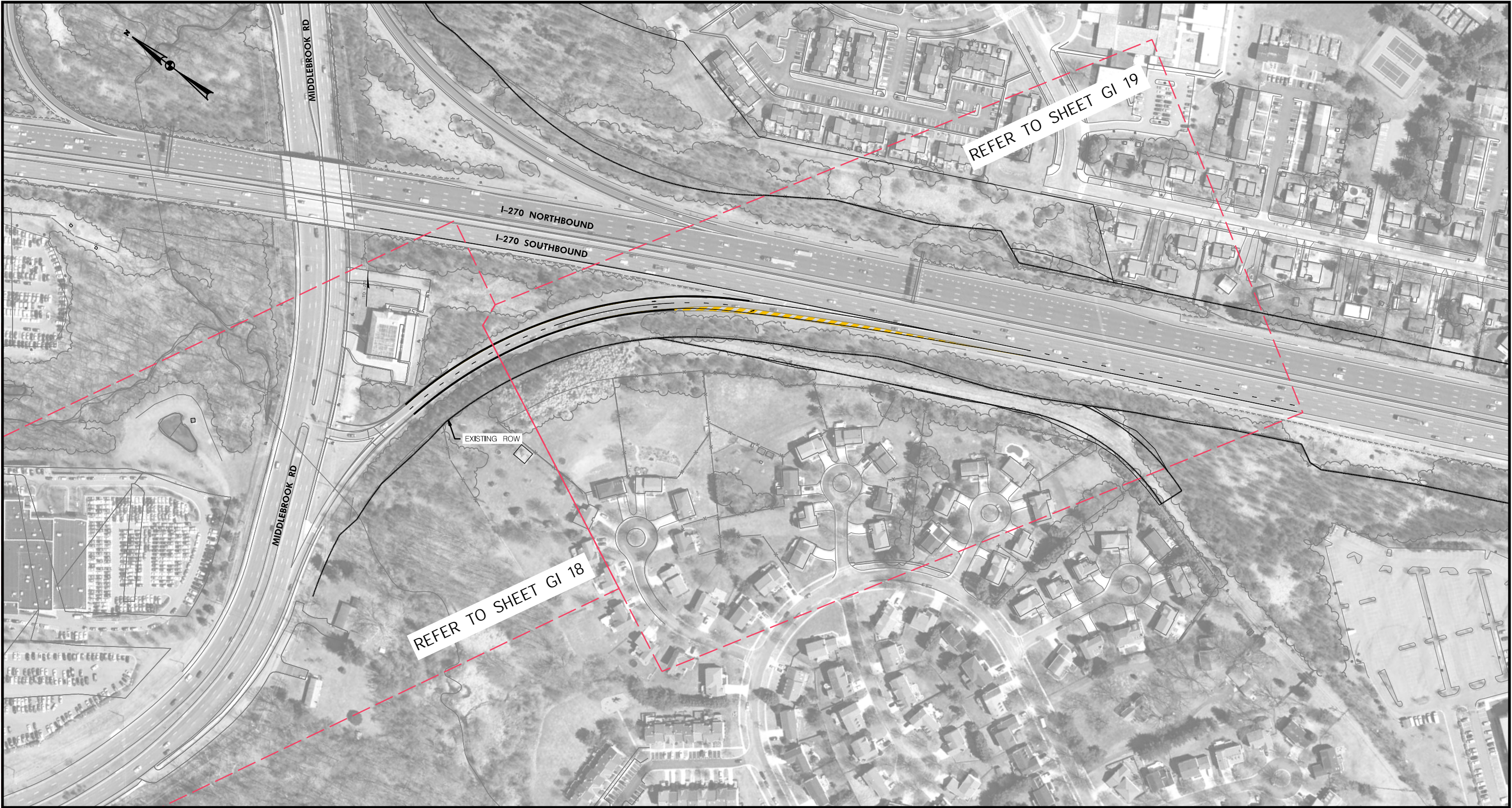
I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

SOUTHBOUND RAMP IMPROVEMENTS
MD 118 (GERMANTOWN RD) OUTER RAMP

DATE: JANUARY 19, 2017

GI 16 OF 41

PLOTTED: Tuesday, January 17, 2017 AT 07:35 AM
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CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

FULL DEPTH RECONSTRUCTION



WEDGE/LEVEL & RESURFACING

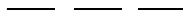


MICRO-SURFACING



LEGEND

PAVEMENT MARKINGS



W-BEAM TRAFFIC BARRIER



CONCRETE BARRIER



EXISTING GRATE INLET
(ADJUST OR REPLACE)



EXISTING MANHOLE COVER
(ADJUST OR REPLACE)



UTILITY CONFLICTS



- NONE ANTICIPATED

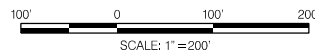


- POSSIBLE



- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

SOUTHBOUND RAMP IMPROVEMENTS
MIDDLEBROOK RD OUTER RAMP LAYOUT

DATE: JANUARY 19, 2017

GI 17 OF 41

PLOTTED: Tuesday, January 17, 2017 AT 02:47 PM
FILE: J:\2015\10144 - I-270 ATM\Tech Proposal\Concepts\Ramp Metering\Geometric Improvements\Southbound\pHD-0007_08_SB_Middlebrook_Rd_200_Scale.dgn



NOTES:
1. NO UTILITY CONFLICTS ANTICIPATED.

CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

FULL DEPTH RECONSTRUCTION



WEDGE/LEVEL & RESURFACING

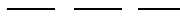


MICRO-SURFACING



LEGEND

PAVEMENT MARKINGS



W-BEAM TRAFFIC BARRIER



CONCRETE BARRIER



EXISTING GRATE INLET
(ADJUST OR REPLACE)



EXISTING MANHOLE COVER
(ADJUST OR REPLACE)



UTILITY CONFLICTS



- NONE ANTICIPATED



- POSSIBLE



- PROBABLE

DRAFT PLANS

50' 0 50' 100'
SCALE: 1" = 100'

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

I-270 INNOVATIVE CONGESTION MANAGEMENT

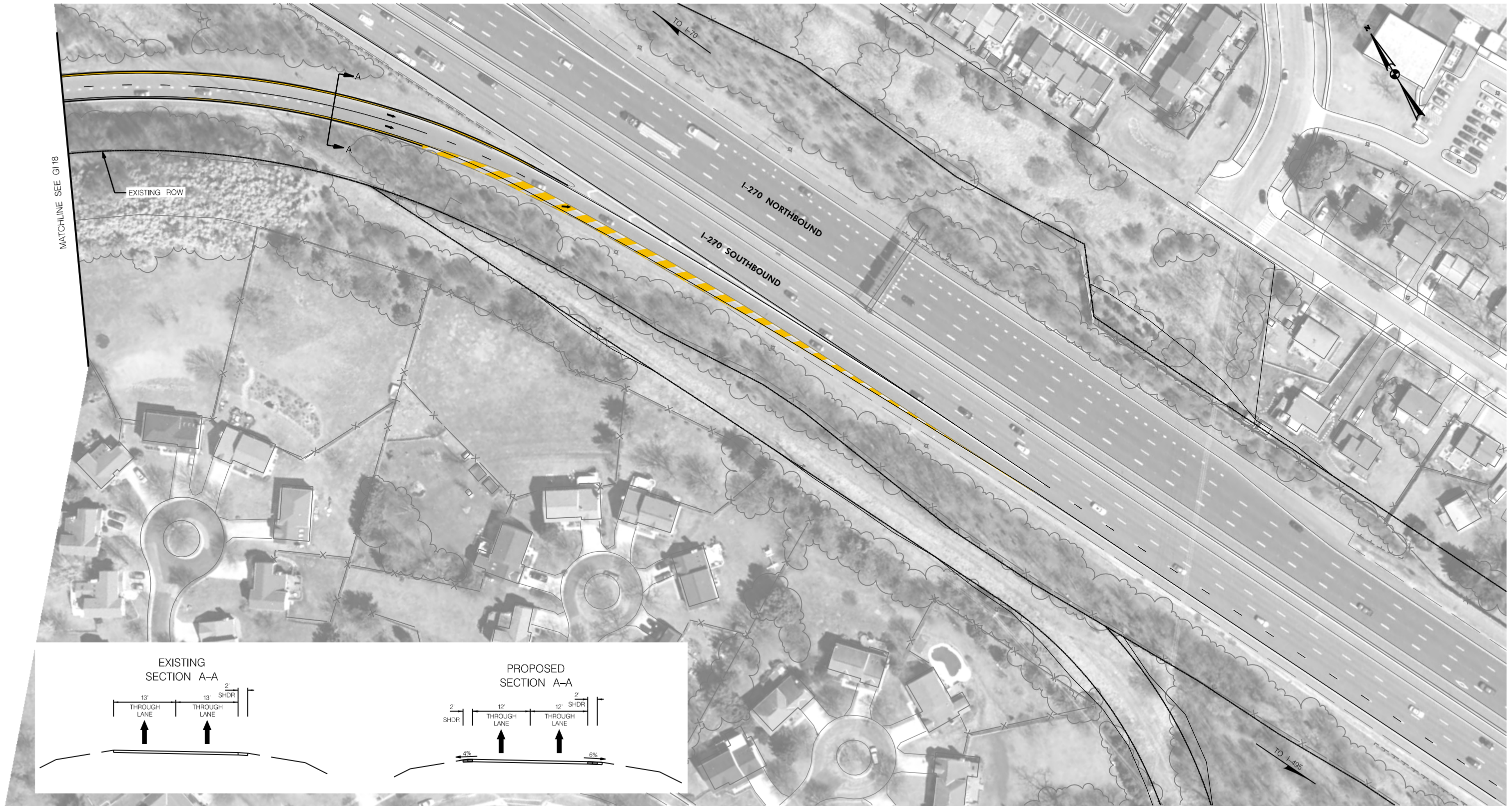
GEOMETRIC IMPROVEMENTS

**SOUTHBOUND RAMP IMPROVEMENTS
MIDDLEBROOK RD OUTER RAMP**

DATE: JANUARY 19, 2017

GI 18 OF 41

PLOTTED: Tuesday, January 17, 2017 AT 07:40 AM
FILE: \\arbit002\jobs_agreements\2015\0144 - I-270 ATM\Tech Proposals\Concepts\Ramp Metering\Geometric Improvements\Southbound\pH-D-0008_SB_Middlebrook_Rd.dgn



LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE


DRAFT PLANS

50' 0 50' 100'

SCALE: 1" = 100'

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

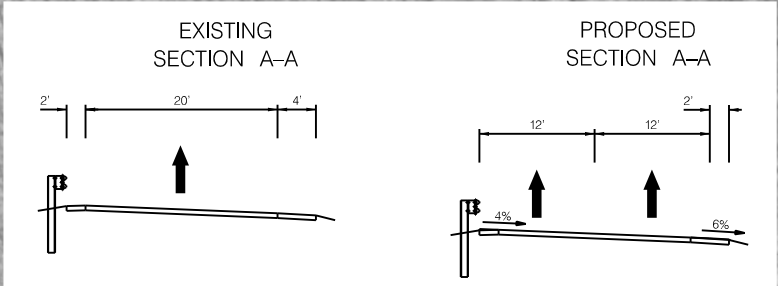
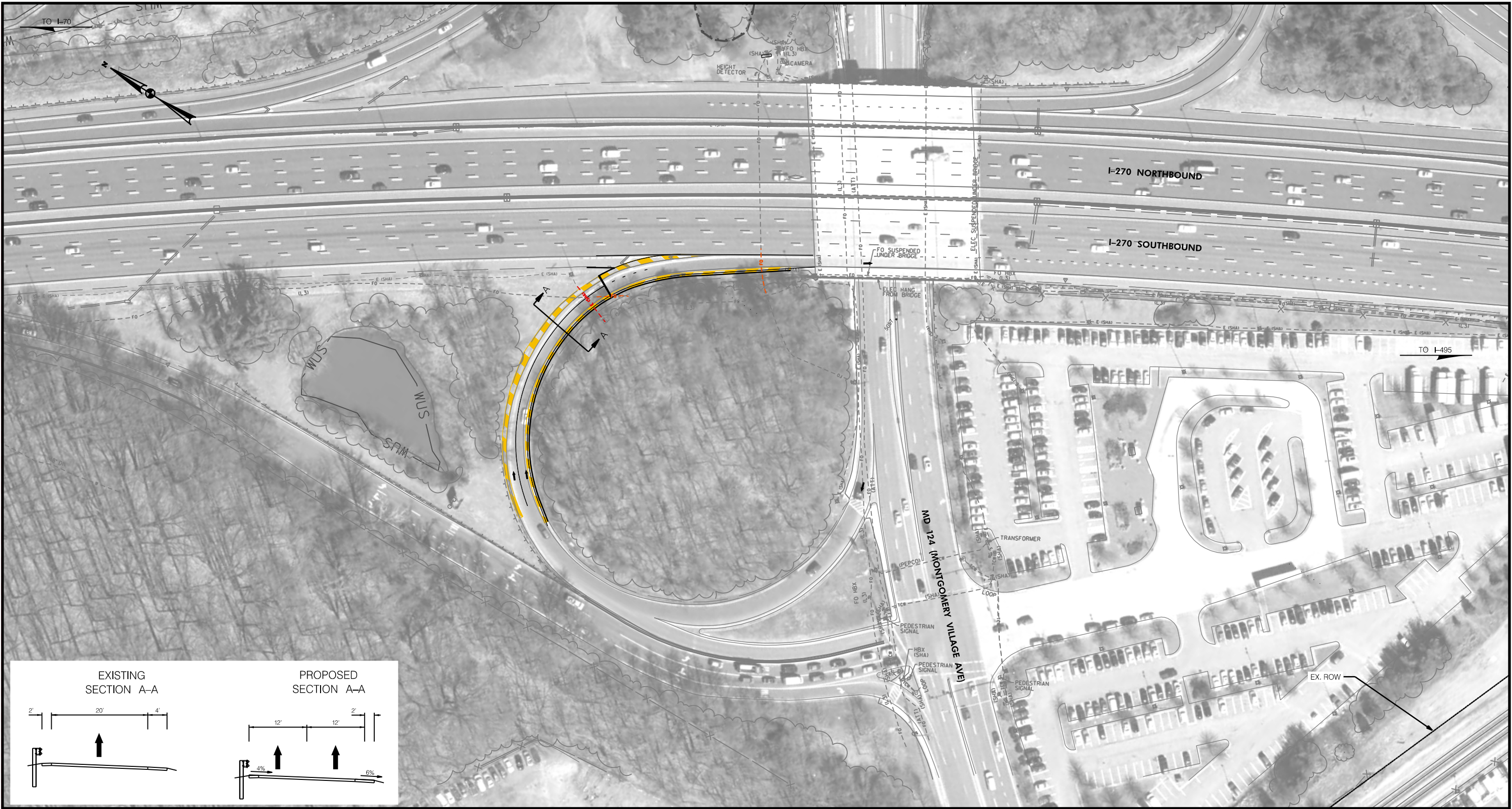


STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

SOUTHBOUND RAMP IMPROVEMENTS
MIDDLEBROOK RD OUTER RAMP

DATE: JANUARY 19, 2017
GI 19 OF 41



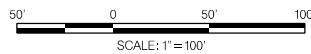
CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS



DATUM: NAD 8391 Horizontal
NAVD 88 Vertical

REVISIONS

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

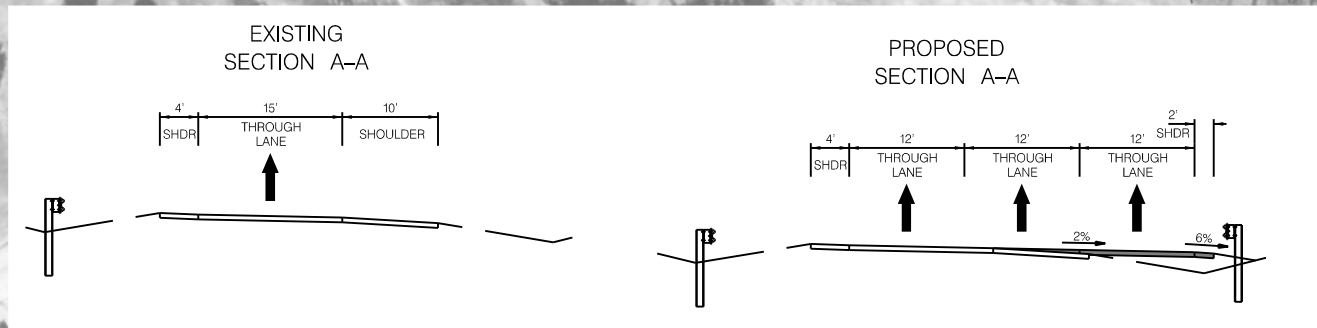
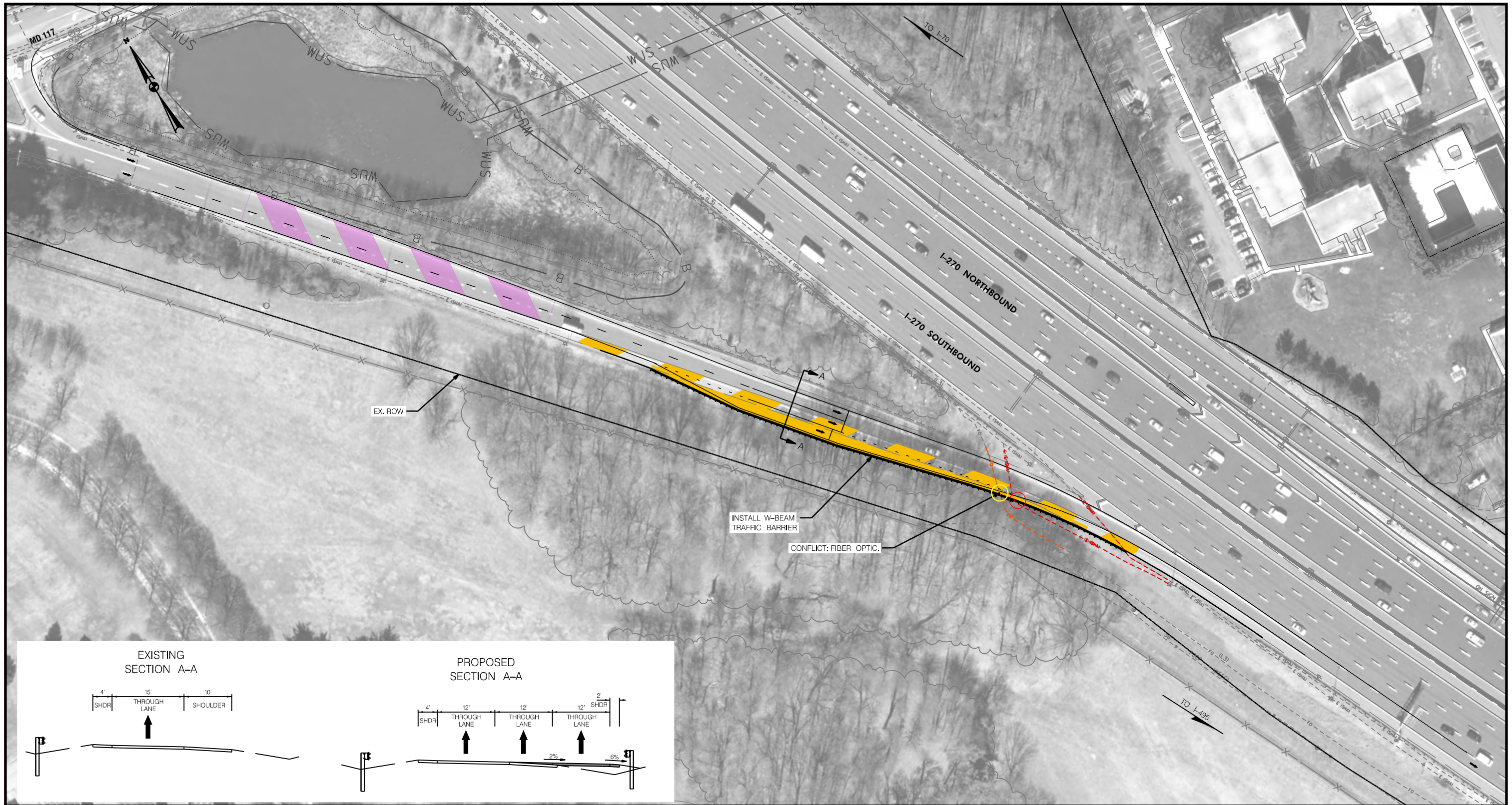
I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

SOUTHBOUND RAMP IMPROVEMENTS
MD 124 LOOP RAMP

DATE: JANUARY 19, 2017

GI 20 OF 41

PLOTTED: Tuesday, January 17, 2017 AT 10:42 AM
FILE: \\arbit\002\jobs_agreements\2015\0144 - I-270 ATM\Tech Proposals\Concepts\Ramp_Meeting\Geometric Improvements\Southbound\pH-D-0010_SB_MD124.dgn



CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

FULL DEPTH RECONSTRUCTION



WEDGE/LEVEL & RESURFACING

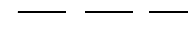


MICRO-SURFACING



LEGEND

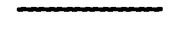
PAVEMENT MARKINGS



W-BEAM TRAFFIC BARRIER



CONCRETE BARRIER



EXISTING GRATE INLET
(ADJUST OR REPLACE)



EXISTING MANHOLE COVER
(ADJUST OR REPLACE)



UTILITY CONFLICTS

NONE ANTICIPATED



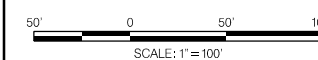
POSSIBLE



PROBABLE




DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS



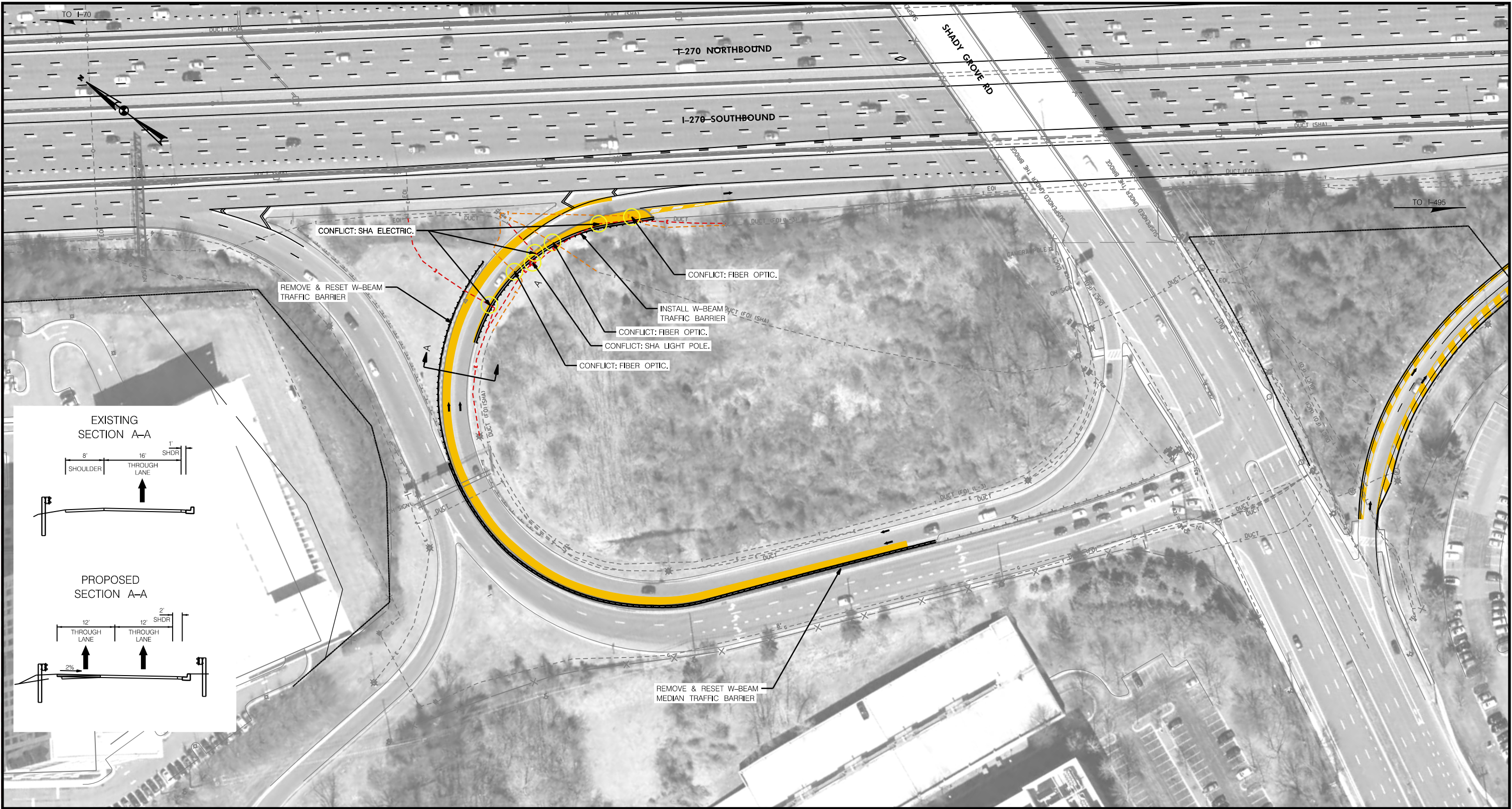
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

SOUTHBOUND RAMP IMPROVEMENTS
MD 117 (DIAMOND AVE) OUTER RAMP

DATE: JANUARY 19, 2017

GI 21 OF 41



CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

FULL DEPTH RECONSTRUCTION



WEDGE/LEVEL & RESURFACING

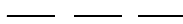


MICRO-SURFACING



LEGEND

PAVEMENT MARKINGS



W-BEAM TRAFFIC BARRIER



CONCRETE BARRIER



EXISTING GRATE INLET
(ADJUST OR REPLACE)



EXISTING MANHOLE COVER
(ADJUST OR REPLACE)



UTILITY CONFLICTS



- NONE ANTICIPATED

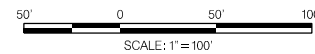


- POSSIBLE



- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

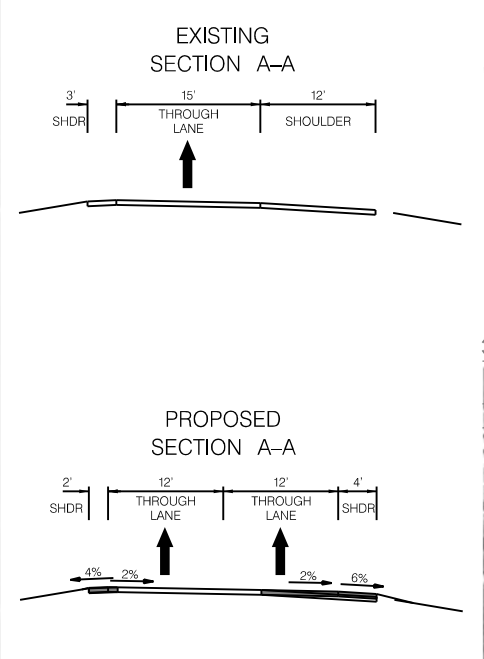
I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

SOUTHBOUND RAMP IMPROVEMENTS
SHADY GROVE RD LOOP RAMP

DATE: JANUARY 19, 2017

GI 23 OF 41

PLOTTED: Tuesday, January 17, 2017 AT 07:52 AM
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CORMAN
CONSTRUCTION

WSP | **PARSONS
BRINCKERHOFF**

FULL DEPTH RECONSTRUCTION



WEDGE/LEVEL & RESURFACING

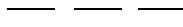


MICRO-SURFACING



LEGEND

PAVEMENT MARKINGS



W-BEAM TRAFFIC BARRIER



CONCRETE BARRIER



EXISTING GRATE INLET
(ADJUST OR REPLACE)



EXISTING MANHOLE COVER
(ADJUST OR REPLACE)



UTILITY CONFLICTS



- NONE
- ANTICIPATED

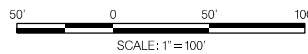


- POSSIBLE



- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

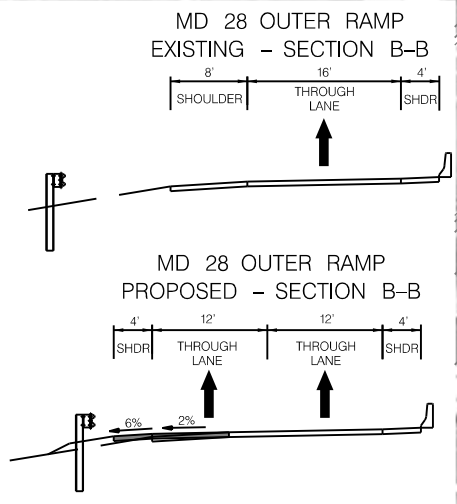
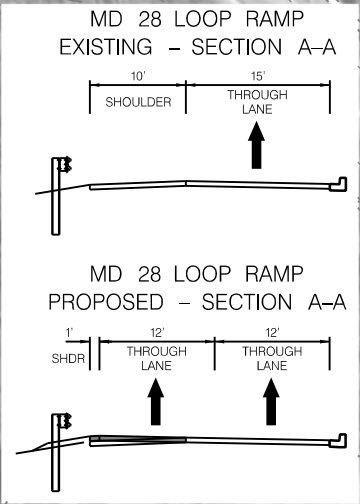
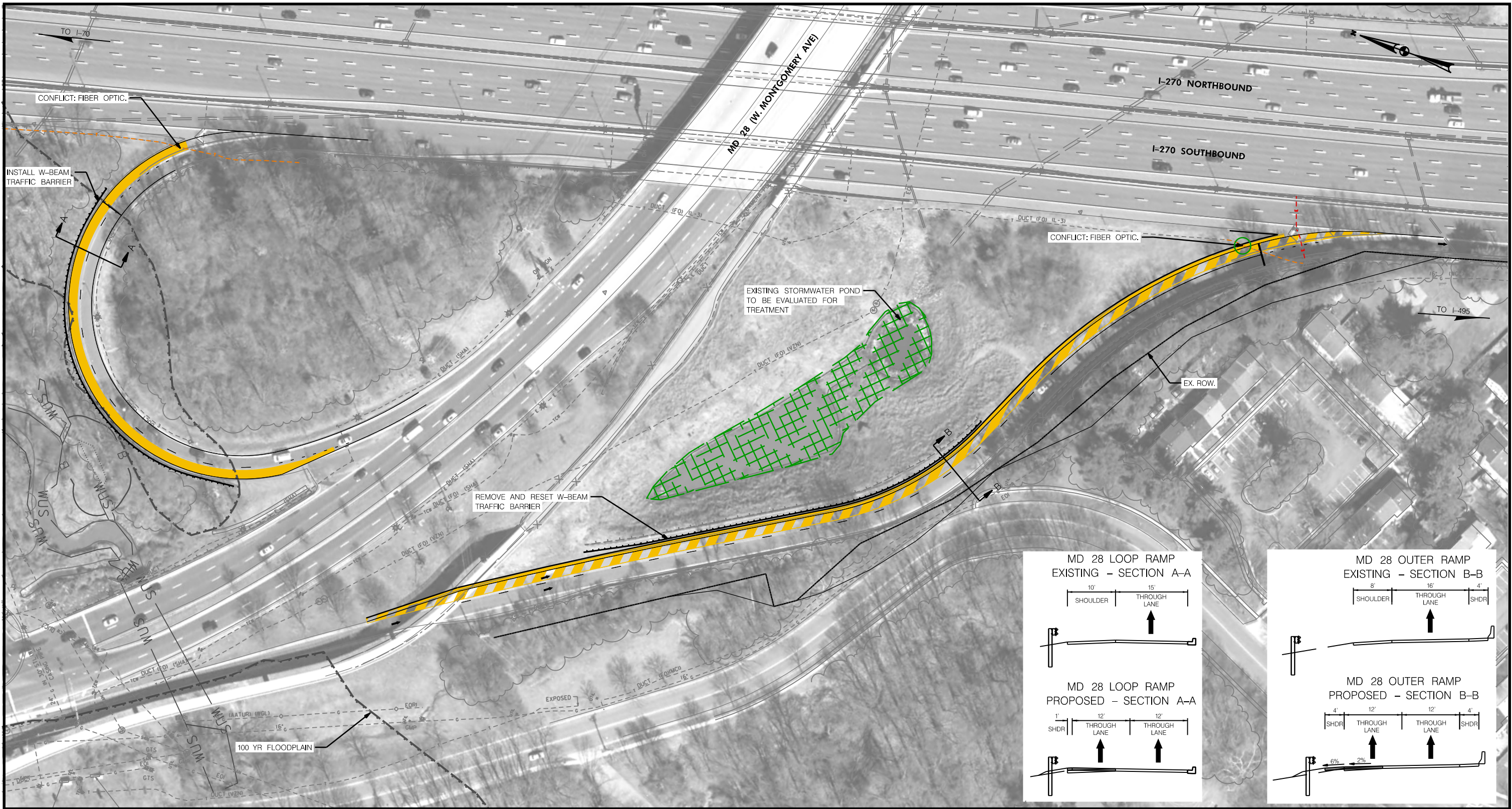
I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

SOUTHBOUND RAMP IMPROVEMENTS
SHADY GROVE RD OUTER RAMP

DATE: JANUARY 19, 2017

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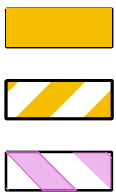
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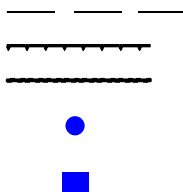
CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

FULL DEPTH RECONSTRUCTION
WEDGE/LEVEL & RESURFACING
MICRO-SURFACING



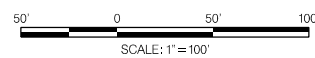
LEGEND
PAVEMENT MARKINGS
W-BEAM TRAFFIC BARRIER
CONCRETE BARRIER
EXISTING GRATE INLET (ADJUST OR REPLACE)
EXISTING MANHOLE COVER (ADJUST OR REPLACE)



UTILITY CONFLICTS
- NONE ANTICIPATED
- POSSIBLE
- PROBABLE



DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

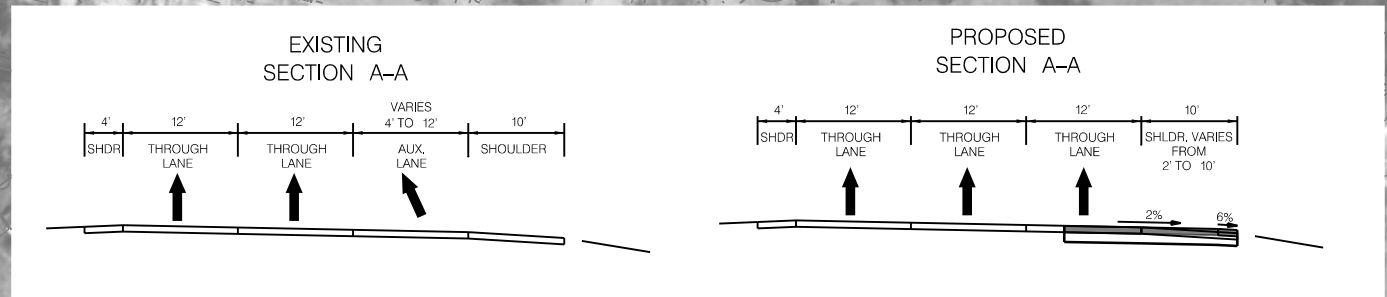
I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

SOUTHBOUND RAMP IMPROVEMENTS
MD 28 OUTER RAMP

DATE: JANUARY 19, 2017

GI 25 OF 41

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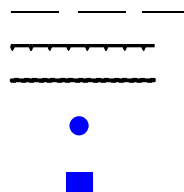
CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

FULL DEPTH RECONSTRUCTION
WEDGE/LEVEL & RESURFACING
MICRO-SURFACING



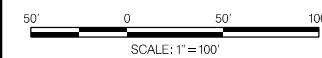
PAVEMENT MARKINGS
W-BEAM TRAFFIC BARRIER
CONCRETE BARRIER
EXISTING GRATE INLET (ADJUST OR REPLACE)
EXISTING MANHOLE COVER (ADJUST OR REPLACE)



UTILITY CONFLICTS
- NONE ANTICIPATED
- POSSIBLE
- PROBABLE



DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

SOUTHBOUND RAMP IMPROVEMENTS
MD 189 OUTER RAMP

DATE: JANUARY 19, 2017

GI 26 OF 41

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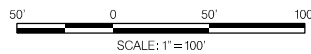
NOTES:
1. NO UTILITY CONFLICTS ANTICIPATED.
2. NO PAVEMENT RESURFACING OR RECONSTRUCTION ANTICIPATED.



LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS



DATUM: NAD 8391 Horizontal
NAVD 88 Vertical

REVISIONS

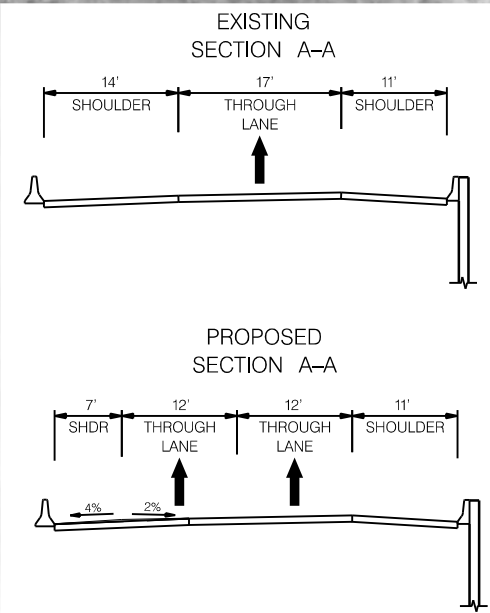
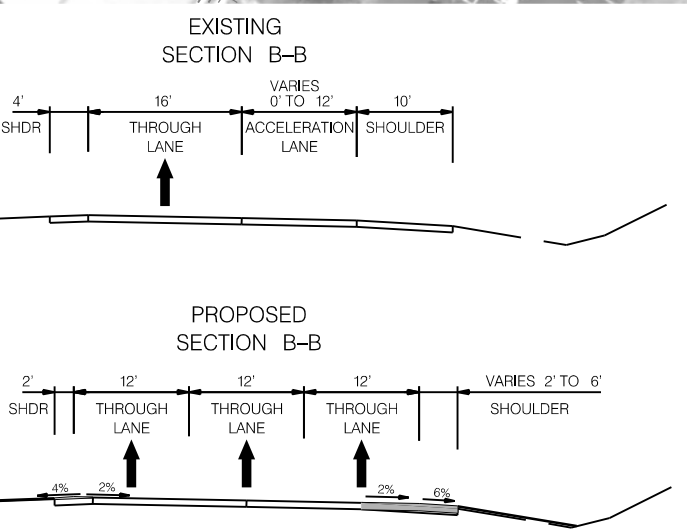
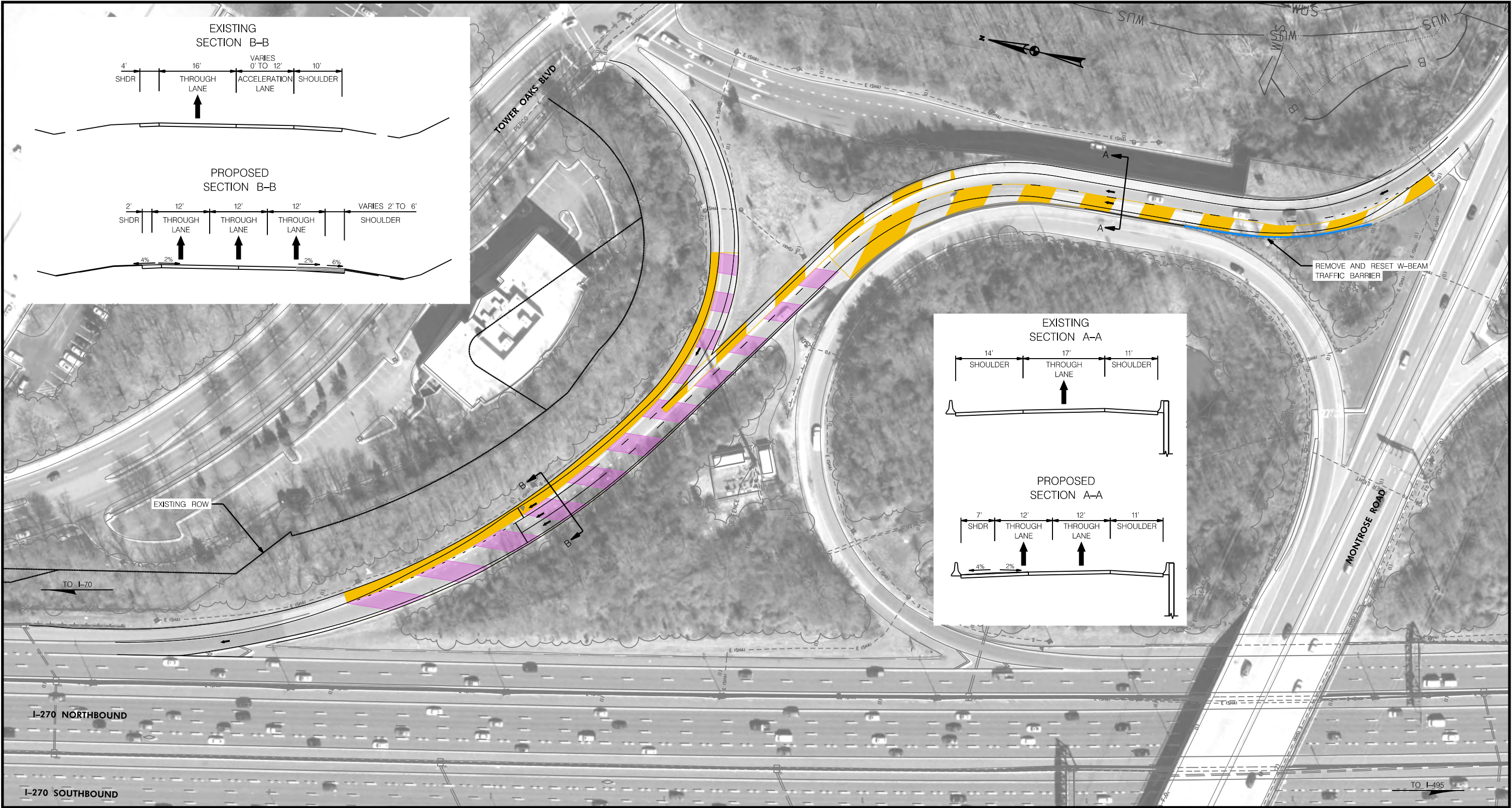


I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

SOUTHBOUND RAMP IMPROVEMENTS
MONTORSE RD OUTER RAMP

DATE: JANUARY 19, 2017

GI 27 OF 41



LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS

50' 0 50' 100'

SCALE: 1" = 100'

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

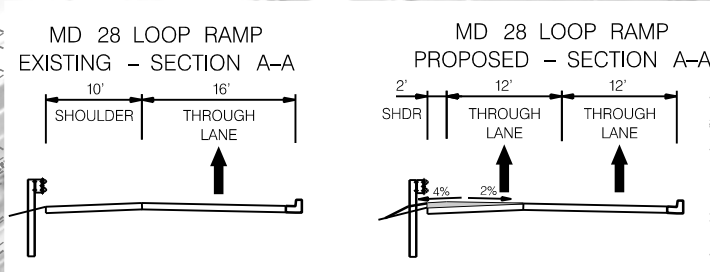
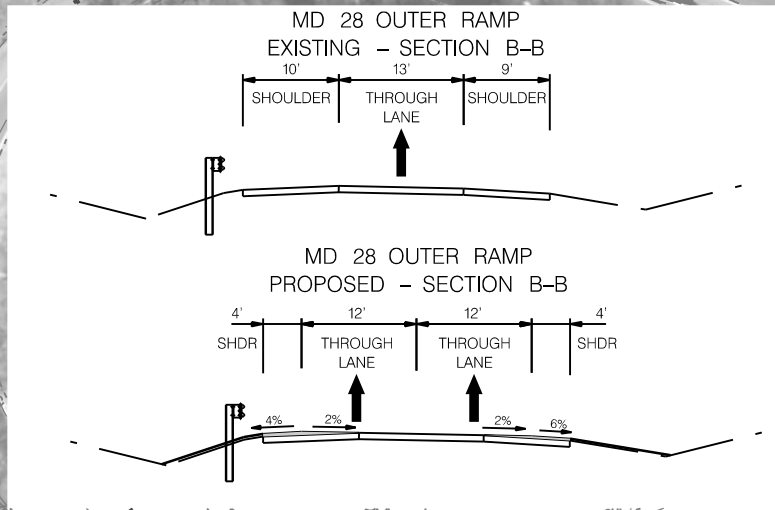
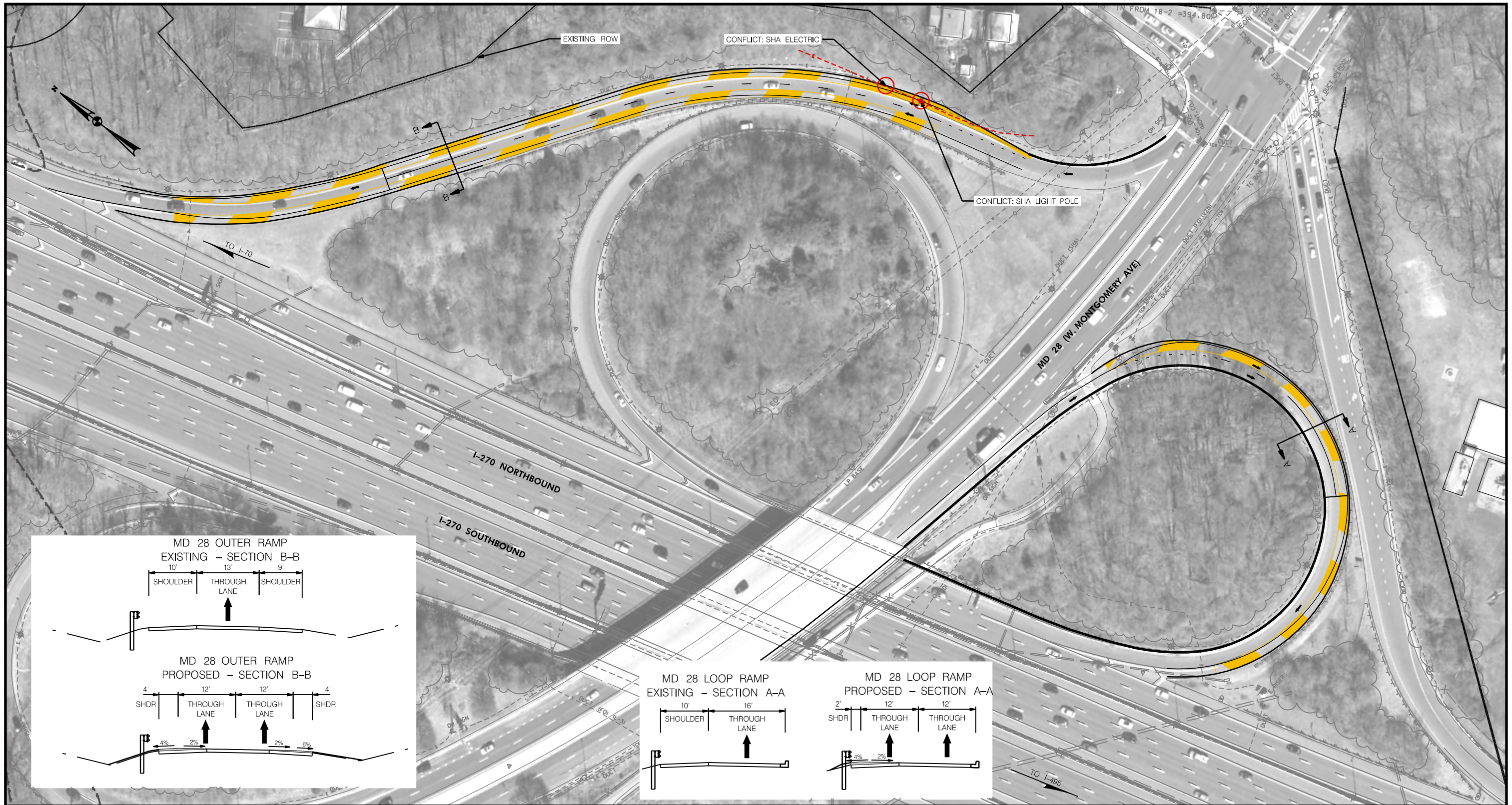
I-270 INNOVATIVE CONGESTION MANAGEMENT

GEOMETRIC IMPROVEMENTS

NORTHBOUND RAMP IMPROVEMENTS
MONTROSE RD OUTER RAMP

DATE: JANUARY 19, 2017

GI 28 OF 41



CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

FULL DEPTH RECONSTRUCTION



WEDGE/LEVEL & RESURFACING

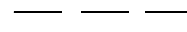


MICRO-SURFACING



LEGEND

PAVEMENT MARKINGS



W-BEAM TRAFFIC BARRIER



CONCRETE BARRIER



EXISTING GRATE INLET
(ADJUST OR REPLACE)



EXISTING MANHOLE COVER
(ADJUST OR REPLACE)



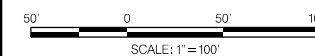
UTILITY CONFLICTS

○ - NONE ANTICIPATED

○ - POSSIBLE

○ - PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

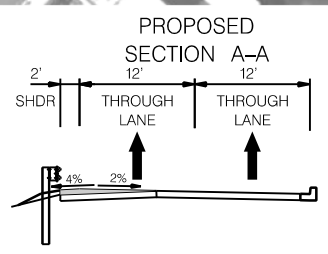
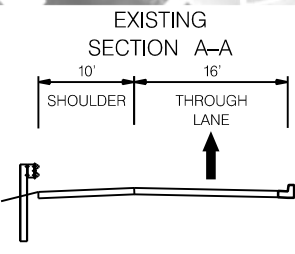
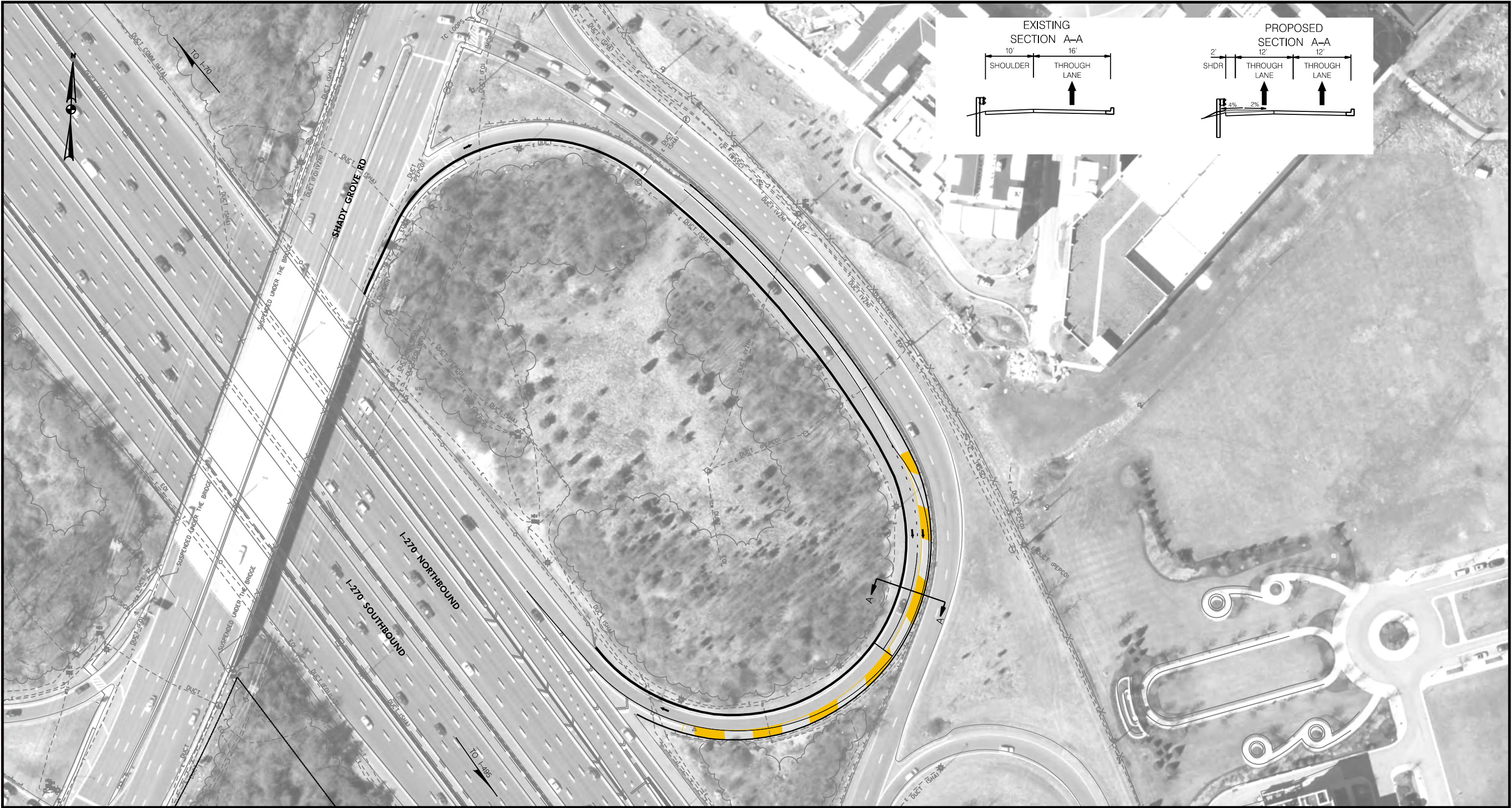
I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

NORTHBOUND RAMP IMPROVEMENTS
MD 28 INNER & OUTER LOOP RAMP

DATE: JANUARY 19, 2017

GI 30 OF 41

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CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS

50' 0 50' 100'

SCALE: 1" = 100'

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

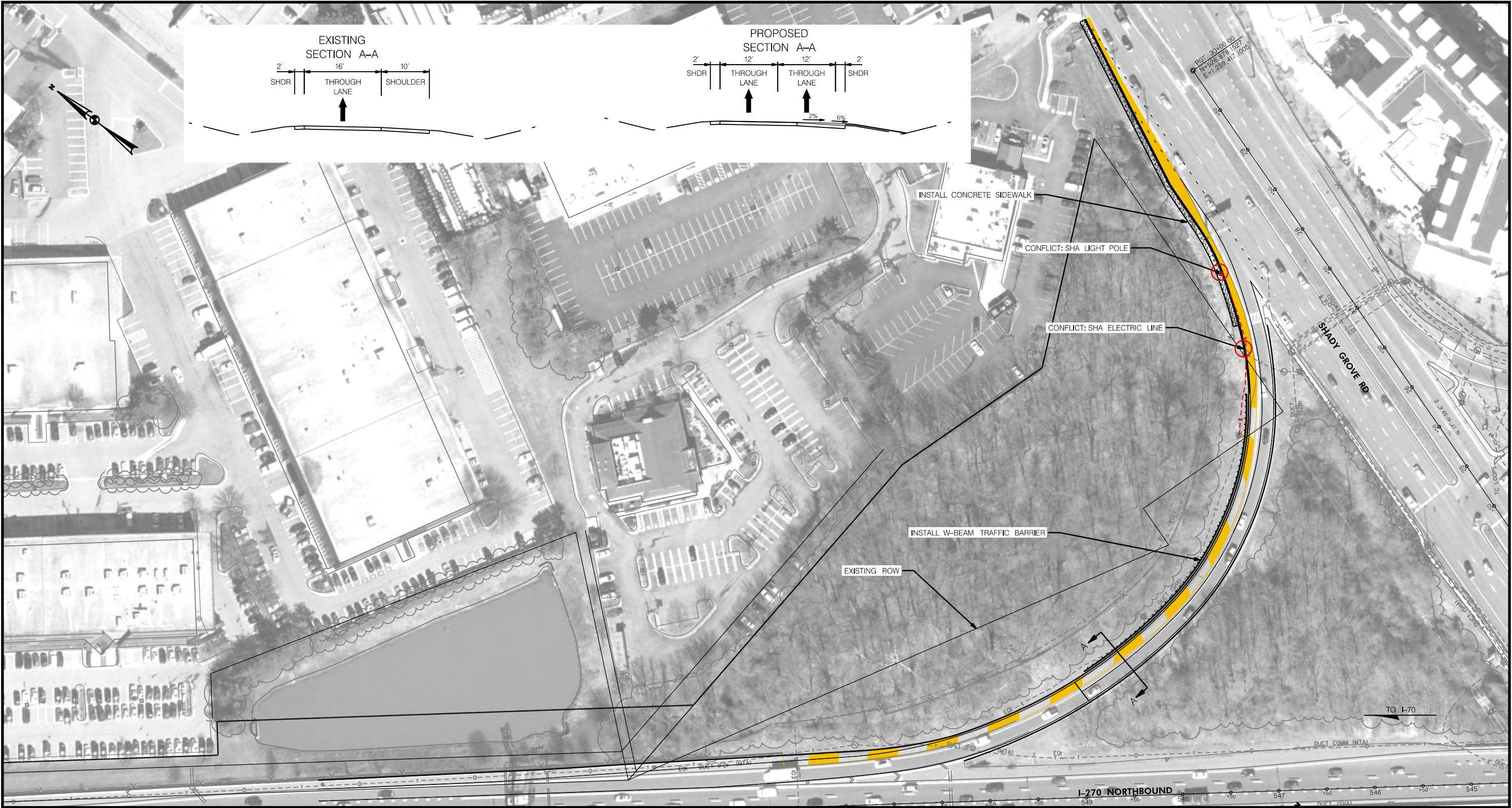
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

I-270 INNOVATIVE CONGESTION MANAGEMENT

GEOMETRIC IMPROVEMENTS

**NORTHBOUND RAMP IMPROVEMENTS
SHADY GROVE RD INNER LOOP RAMP**

DATE: JANUARY 19, 2017	GI 31 OF 41
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FULL DEPTH RECONSTRUCTION



WEDGE/LEVEL & RESURFACING

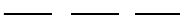


MICRO-SURFACING



LEGEND

PAVEMENT MARKINGS



W-BEAM TRAFFIC BARRIER



CONCRETE BARRIER



EXISTING GRATE INLET
(ADJUST OR REPLACE)



EXISTING MANHOLE COVER
(ADJUST OR REPLACE)



UTILITY CONFLICTS



- NONE
ANTICIPATED

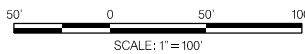


- POSSIBLE



- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS



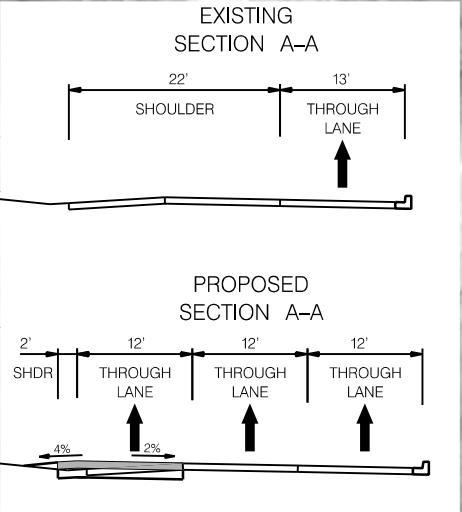
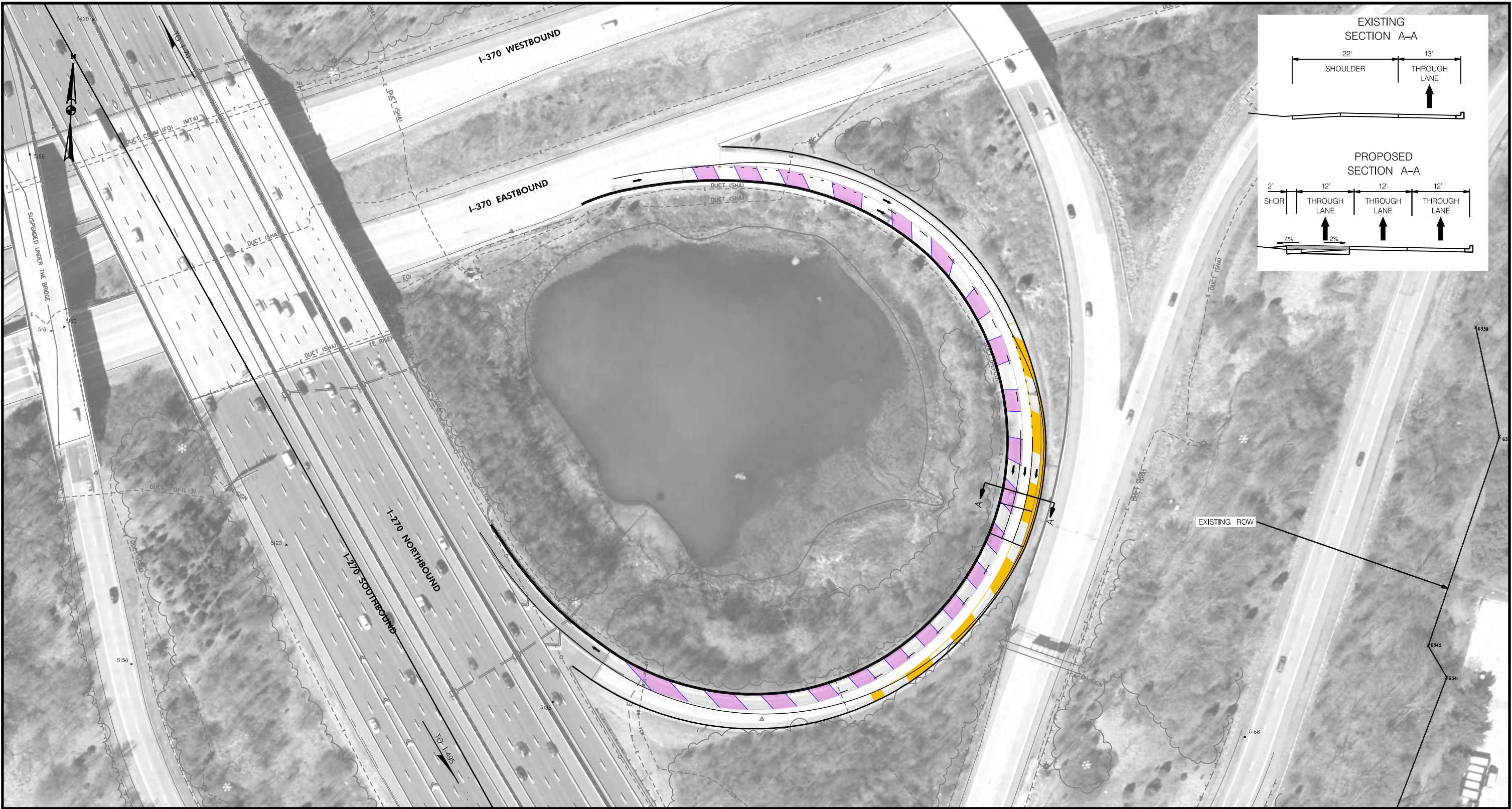
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DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

NORTHBOUND RAMP IMPROVEMENTS
SHADY GROVE RD OUTER RAMP

DATE: JANUARY 19, 2017

GI 32 OF 41



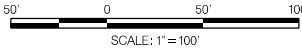
CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

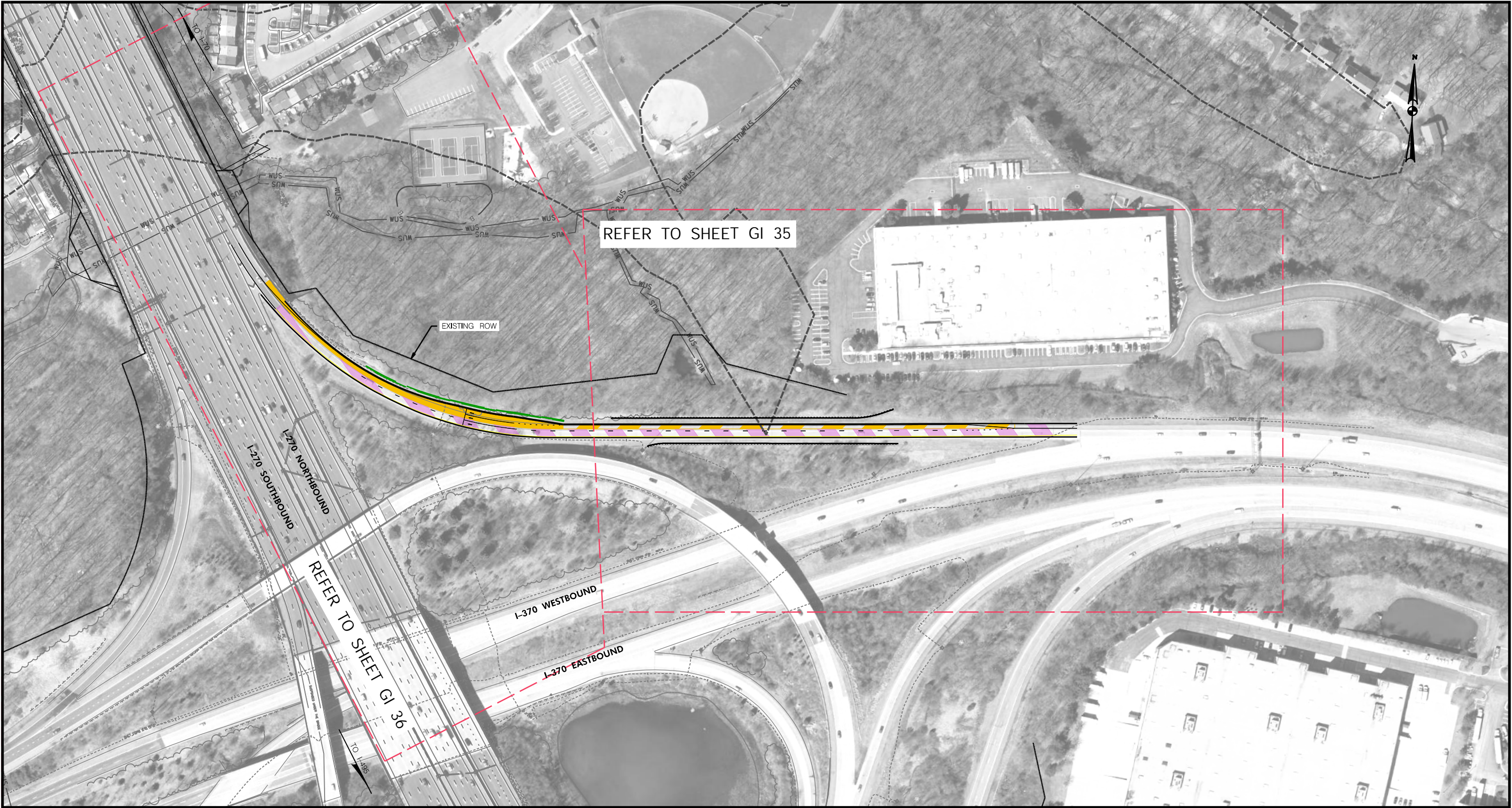
I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

NORTHBOUND RAMP IMPROVEMENTS
I-370 INNER LOOP RAMP

DATE: JANUARY 19, 2017

GI 33 OF 41

PLOTTED: Tuesday, January 17, 2017 AT 08:26 AM
FILE: \\arbit002\jobs_agreements\2015\0144 - I-270 ATM\Tech Proposals\Concepts\Ramp Metering\Geometric Improvements\Northbound\pHD-0006_12_NB.dgn



CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

FULL DEPTH RECONSTRUCTION



WEDGE/LEVEL & RESURFACING

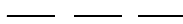


MICRO-SURFACING



LEGEND

PAVEMENT MARKINGS



W-BEAM TRAFFIC BARRIER



CONCRETE BARRIER



EXISTING GRATE INLET
(ADJUST OR REPLACE)



EXISTING MANHOLE COVER
(ADJUST OR REPLACE)



UTILITY CONFLICTS



- NONE ANTICIPATED

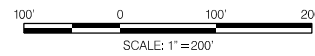


- POSSIBLE



- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

I-270 INNOVATIVE CONGESTION MANAGEMENT

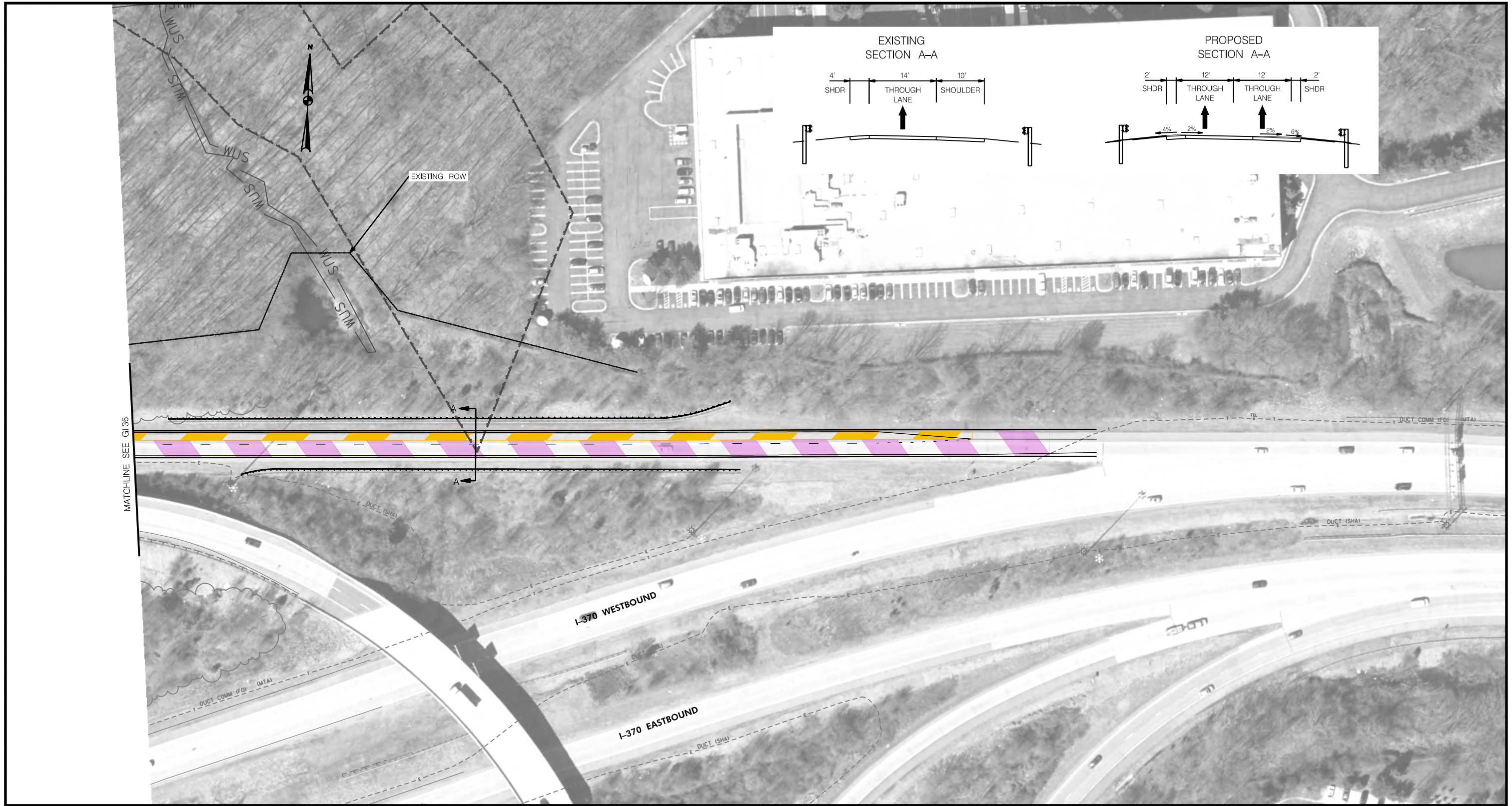
GEOMETRIC IMPROVEMENTS

NORTHBOUND RAMP IMPROVEMENTS
I-370 OUTER RAMP LAYOUT

DATE: JANUARY 19, 2017

GI 34 OF 41

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LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS

50' 0 50' 100'

SCALE: 1" = 100'

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

SHA

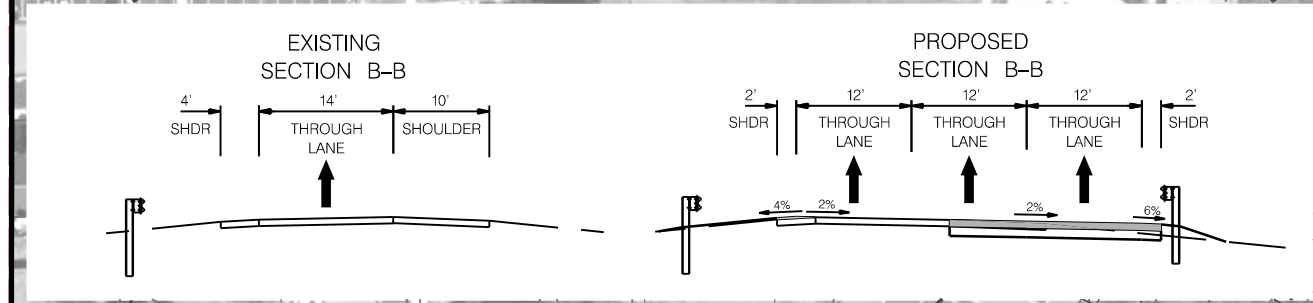
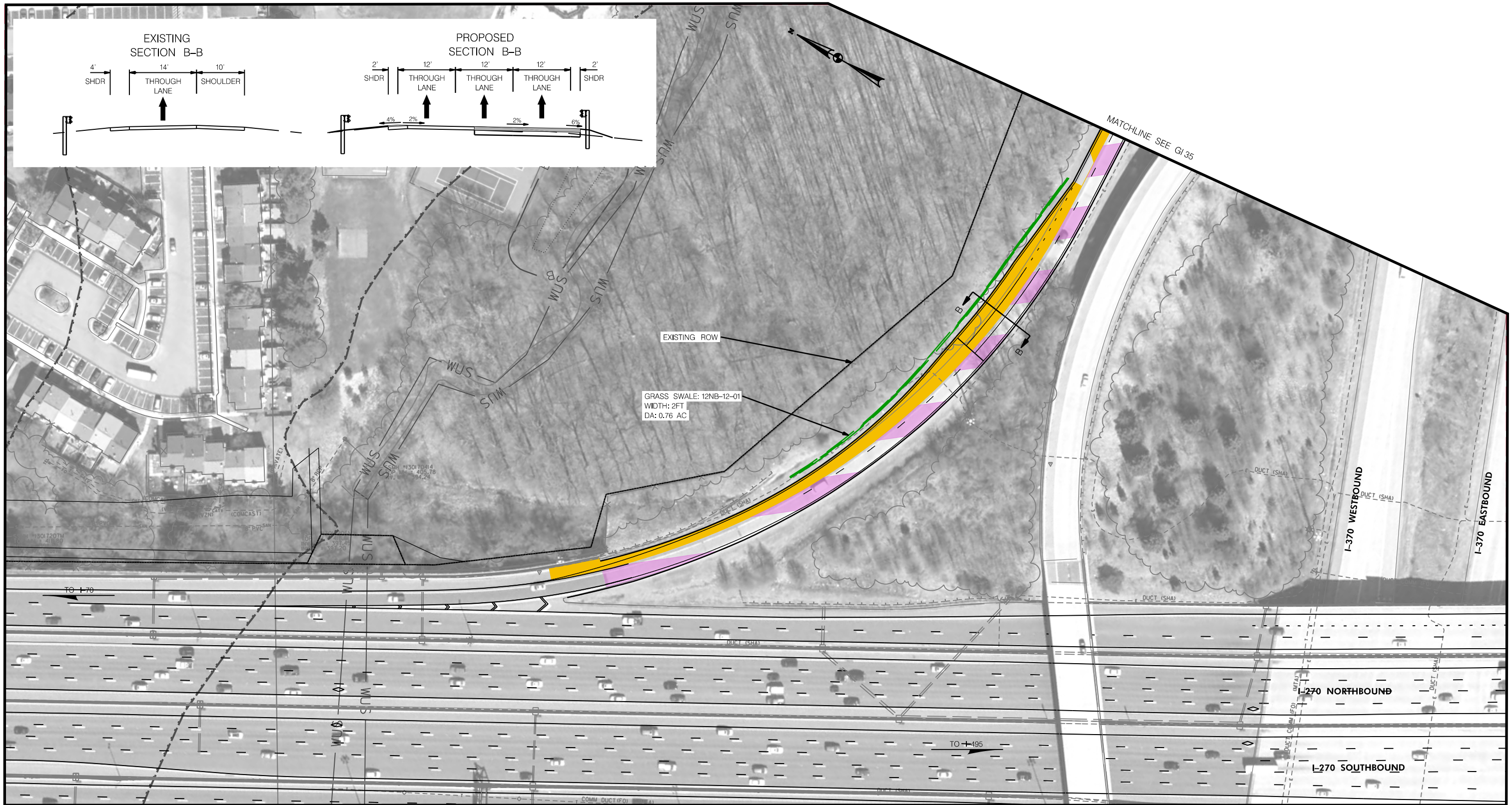
I-270 INNOVATIVE CONGESTION MANAGEMENT

GEOMETRIC IMPROVEMENTS

NORTHBOUND RAMP IMPROVEMENTS
I-370 OUTER LOOP RAMP

DATE: JANUARY 19, 2017

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LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

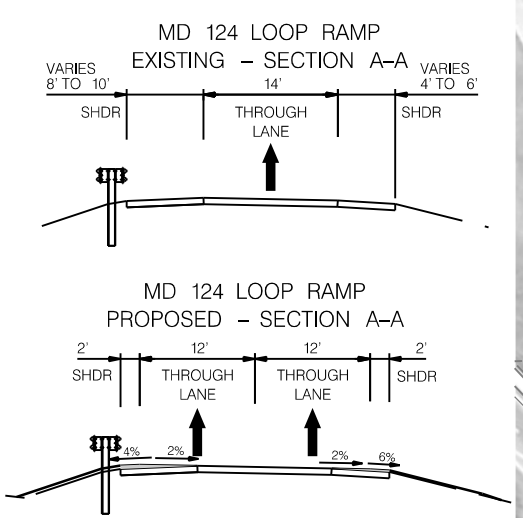
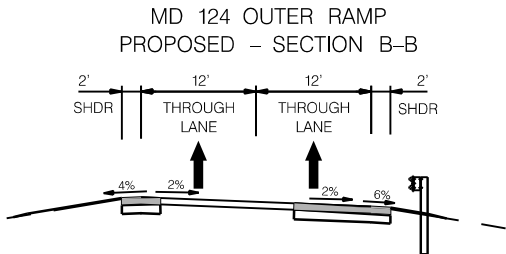
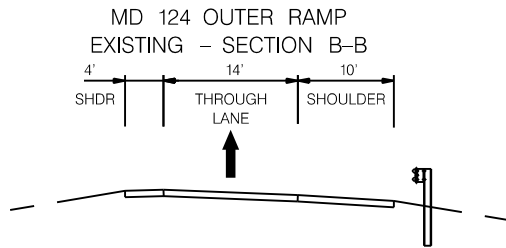
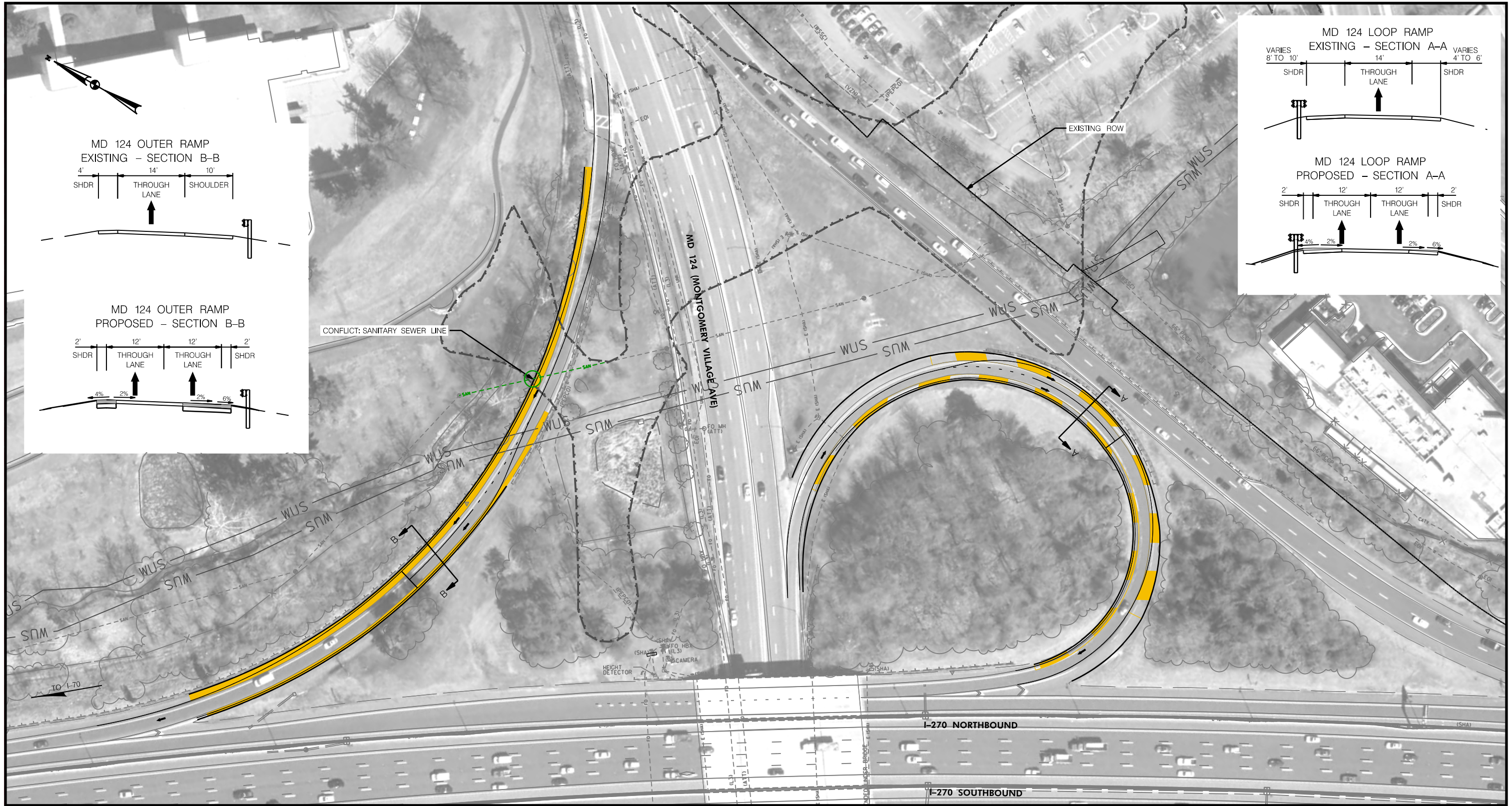
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

NORTHBOUND RAMP IMPROVEMENTS
I-370 OUTER LOOP RAMP

DATE: JANUARY 19, 2017

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CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

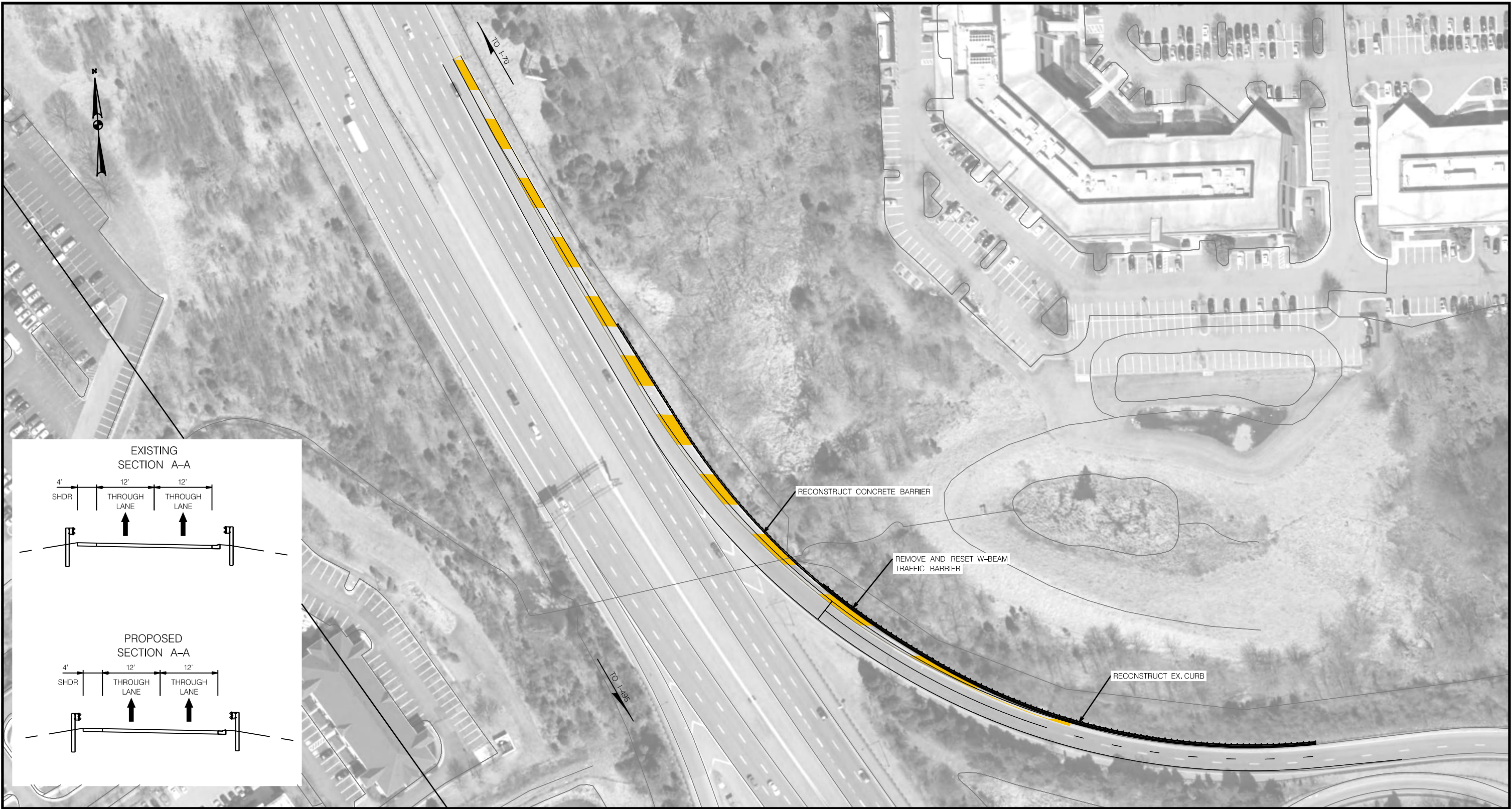
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

I-270 INNOVATIVE CONGESTION MANAGEMENT

GEOMETRIC IMPROVEMENTS

NORTHBOUND RAMP IMPROVEMENTS
MD 124 INNER & OUTER LOOP RAMP

DATE: JANUARY 19, 2017	GI 37 OF 41
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LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	
UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

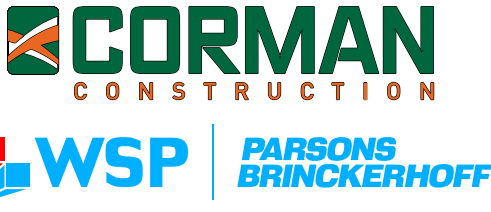
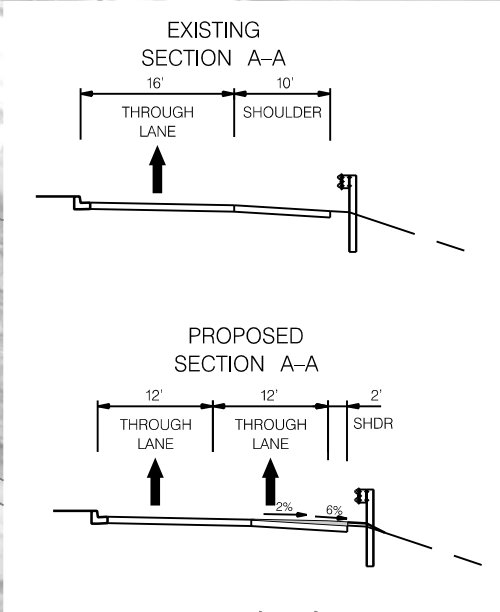
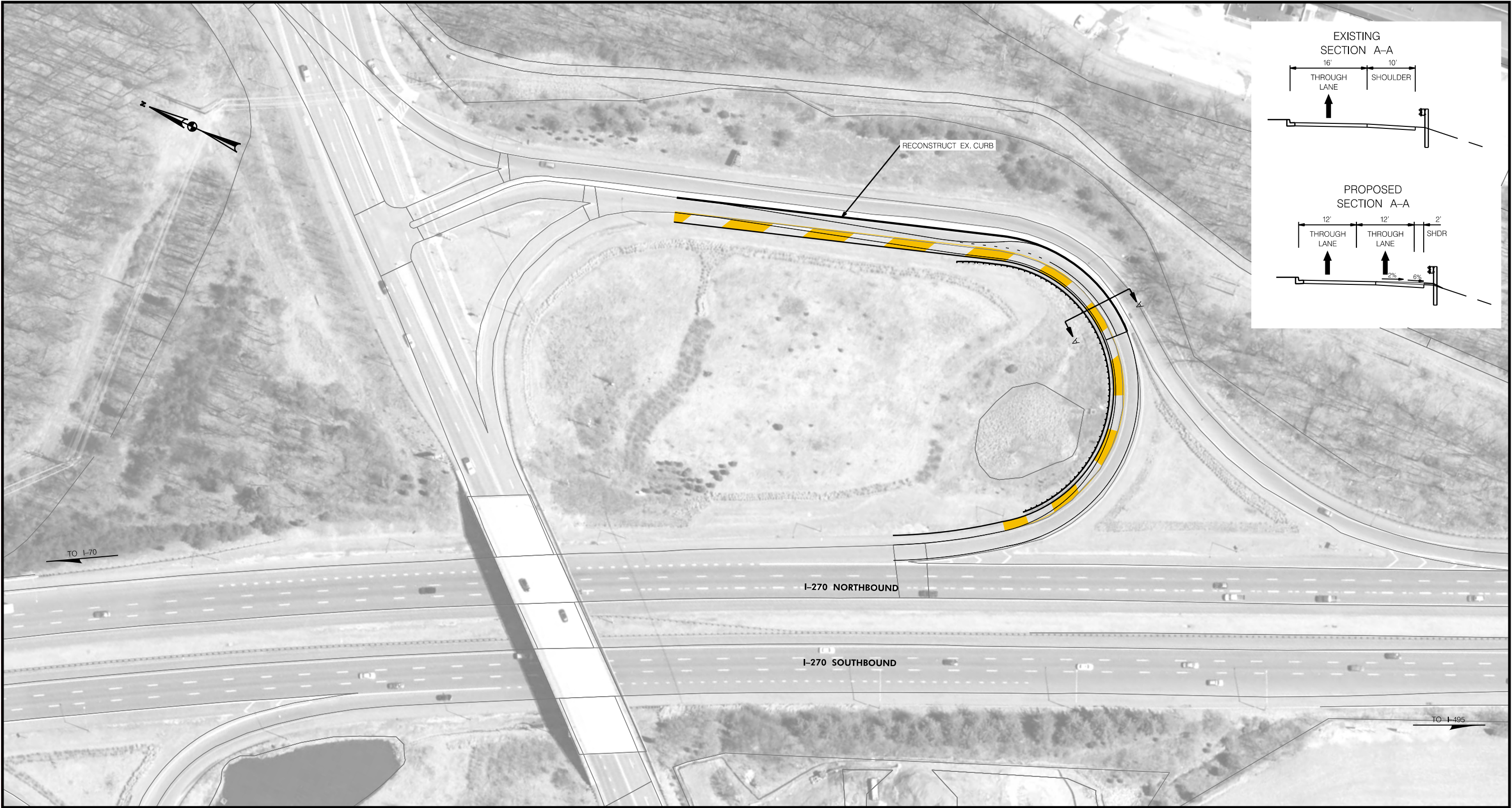
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

NORTHBOUND RAMP IMPROVEMENTS
MD 118 OUTER LOOP RAMP

DATE: JANUARY 19, 2017

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LEGEND			
FULL DEPTH RECONSTRUCTION		PAVEMENT MARKINGS	
WEDGE/LEVEL & RESURFACING		W-BEAM TRAFFIC BARRIER	
MICRO-SURFACING		CONCRETE BARRIER	
		EXISTING GRATE INLET (ADJUST OR REPLACE)	
		EXISTING MANHOLE COVER (ADJUST OR REPLACE)	
UTILITY CONFLICTS			
	- NONE ANTICIPATED		
	- POSSIBLE		
	- PROBABLE		

DRAFT PLANS

50' 0 50' 100'

SCALE: 1" = 100'

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

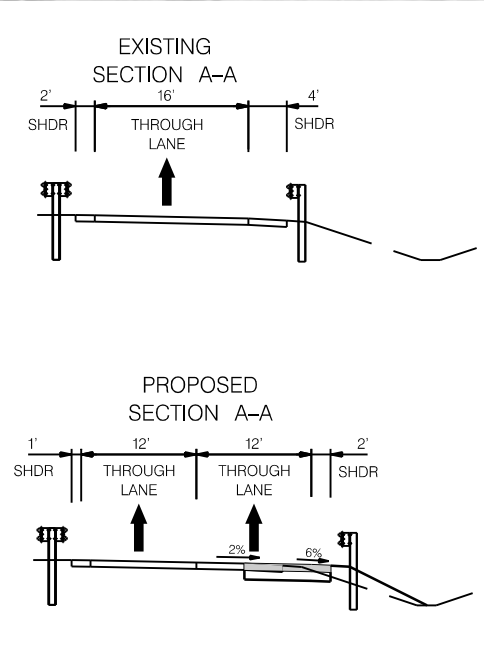
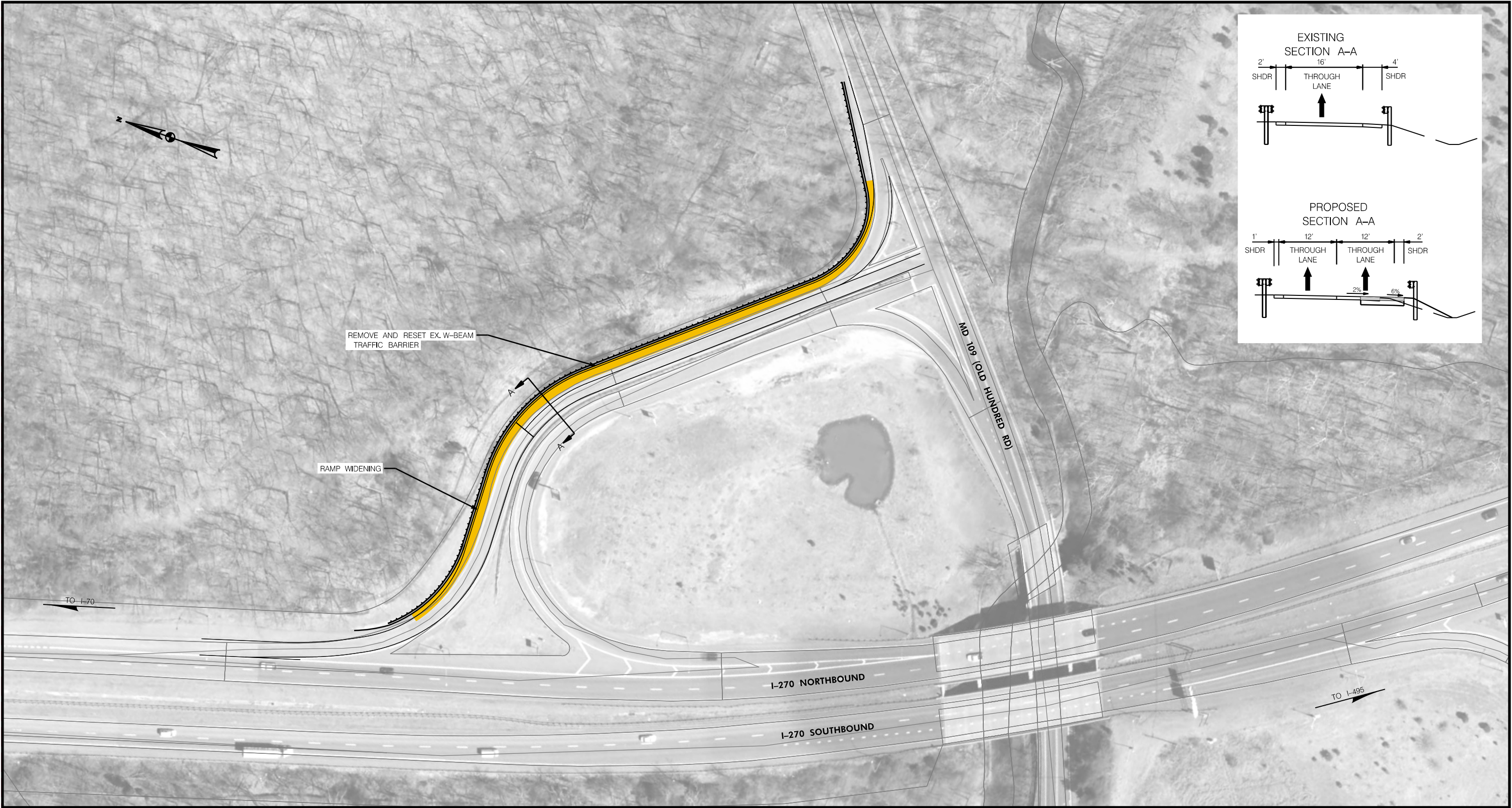
I-270 INNOVATIVE CONGESTION MANAGEMENT

GEOMETRIC IMPROVEMENTS

NORTHBOUND RAMP IMPROVEMENTS
MD 121 INNER LOOP RAMP

DATE: JANUARY 19, 2017

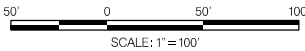
GI 39 OF 41



LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

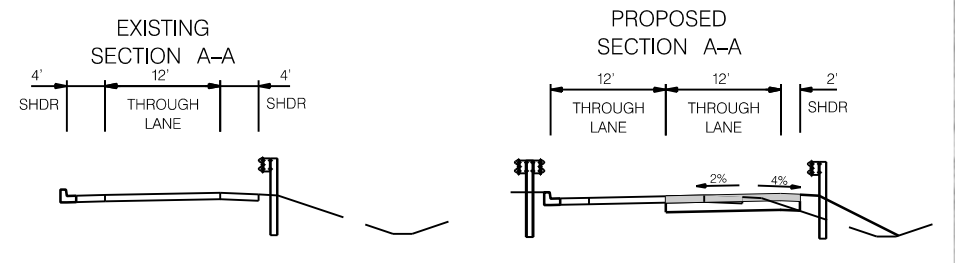
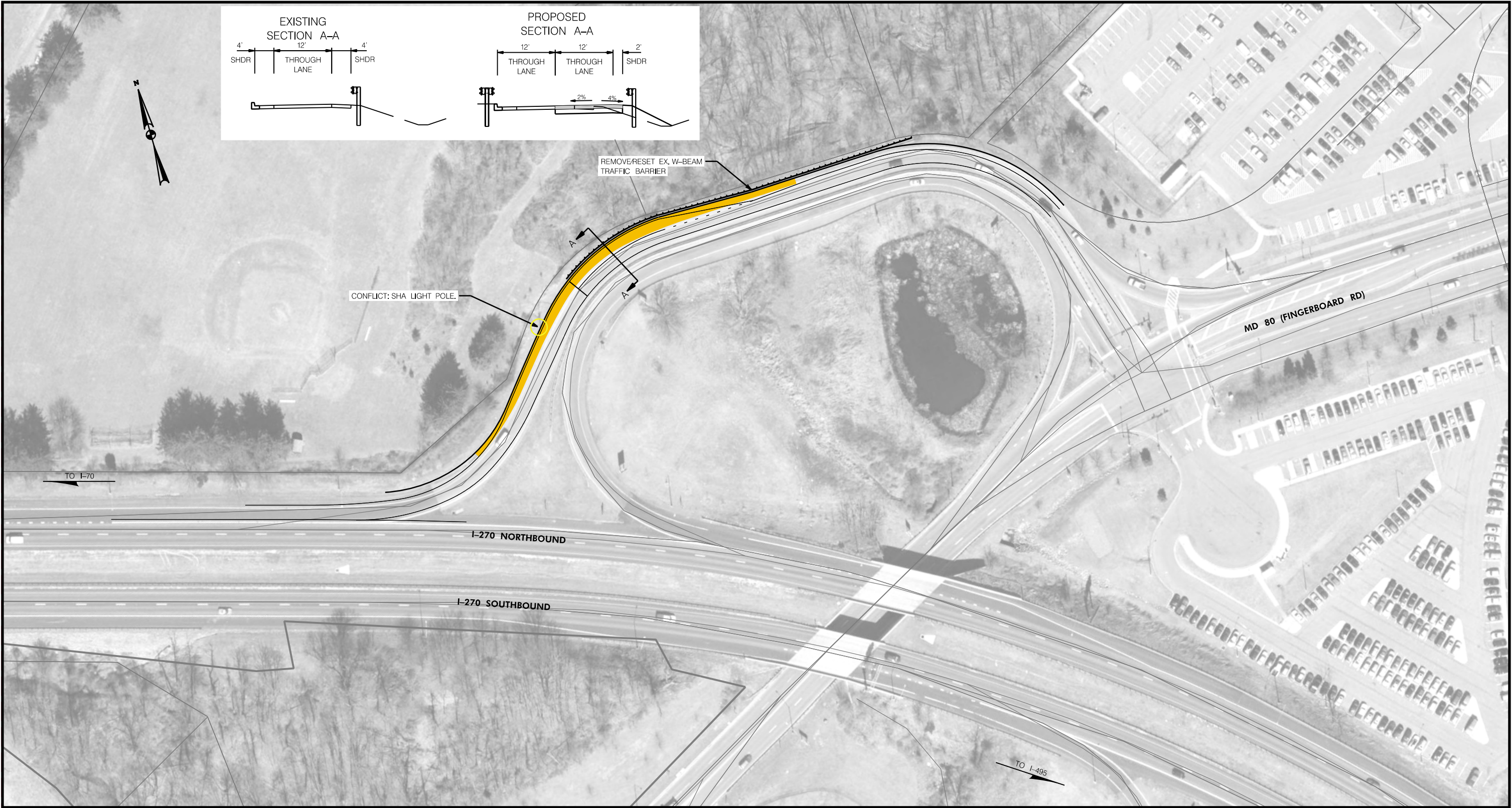


I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS

NORTHBOUND RAMP IMPROVEMENTS
MD 109 OUTER LOOP RAMP

DATE: JANUARY 19, 2017

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CONFLICT: SHA LIGHT POLE.

REMOVE/RESET EX. W-BEAM TRAFFIC BARRIER

I-270 NORTHBOUND

I-270 SOUTHBOUND

MD 80 (FINGERBOARD RD)

TO I-495



LEGEND	
FULL DEPTH RECONSTRUCTION	
WEDGE/LEVEL & RESURFACING	
MICRO-SURFACING	
PAVEMENT MARKINGS	
W-BEAM TRAFFIC BARRIER	
CONCRETE BARRIER	
EXISTING GRATE INLET (ADJUST OR REPLACE)	
EXISTING MANHOLE COVER (ADJUST OR REPLACE)	

UTILITY CONFLICTS	
	- NONE ANTICIPATED
	- POSSIBLE
	- PROBABLE


DRAFT PLANS

50' 0 50' 100'

SCALE: 1" = 100'

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

I-270 INNOVATIVE CONGESTION MANAGEMENT
GEOMETRIC IMPROVEMENTS
NORTHBOUND RAMP IMPROVEMENTS
MD 80 (FINGERBOARD RD) OUTER RAMP

DATE: JANUARY 19, 2017

GI 41 OF 41

DRILL HOLES

DRILL HOLES

DRILL HOLES

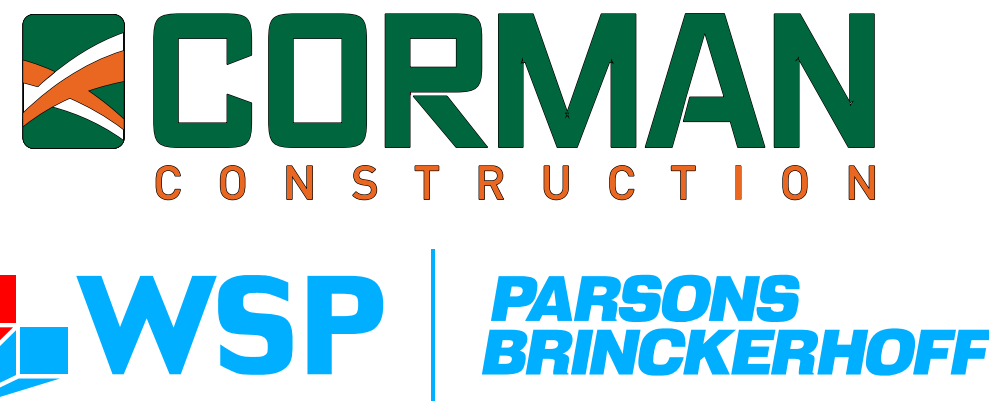
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BY: roachve -

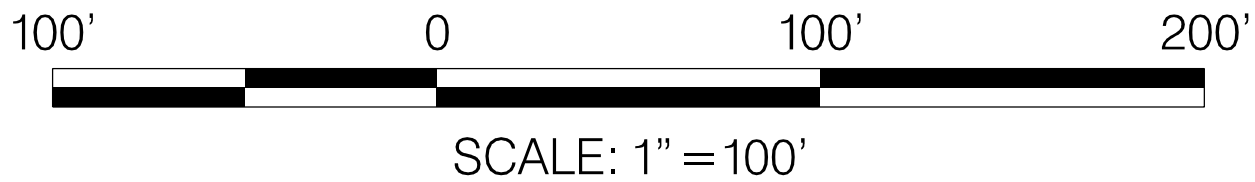


CONSTRUCTION DETAILS:
A. INSTALL PROPOSED INFRARED DETECTOR.

ATM LEGEND					
EXISTING GANTRY SIGN		EXISTING SIGNAL OR ELECTRICAL CABINET		PROPOSED POLE MOUNTED RAMP METER	
EXISTING CANTILEVER SIGN		EXISTING DMS		PROPOSED WIRELESS ANTENNA	
EXISTING FIBER MARKER		EXISTING UTILITY POLE		PROPOSED NETWORK ACCESS POINT	
EXISTING RTMS		PROPOSED GANTRY SIGN		PROPOSED SIGNAL CABINET	
EXISTING RWIS		PROPOSED DMS		PROPOSED INFRARED DETECTOR	
EXISTING HUT		PROPOSED PUCK DETECTOR		PROPOSED FIBER CONDUIT	
EXISTING NIRS		PROPOSED LANE CONTROL SIGNAL		PROPOSED ELECTRICAL CONDUIT	
EXISTING CCTV CAMERA		PROPOSED CCTV CAMERA		PROPOSED FIBER MANHOLE	
EXISTING FIBER MANHOLE		PROPOSED OVERHEAD RAMP METER		PROPOSED ELECTRICAL MANHOLE	
EXISTING MO.CO.CCTV CAMERA		PROPOSED 30' AND 45' CAMERA FOR HSR		OVERHEAD SIGNS AND STRUCTURE TO BE INSTALLED BY OTHERS	
		PROPOSED 30' CAMERA FOR HSR			



DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION INNOVATIVE CONTRACTING DIVISION	
I-270 INNOVATIVE CONGESTION MANAGEMENT MANAGED MOTORWAYS	
SEGMENT 1 I-270 - SOUTH OF PARK MILLS RD	
DATE: JANUARY 19, 2017	MM 001 OF 108

PLOTTED: Monday, January 16, 2017 AT 05:48 PM
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DRILL HOLES

DRILL HOLES

DRILL HOLES

BORDER REV. DATE: March 27, 2007

BY: roachve -



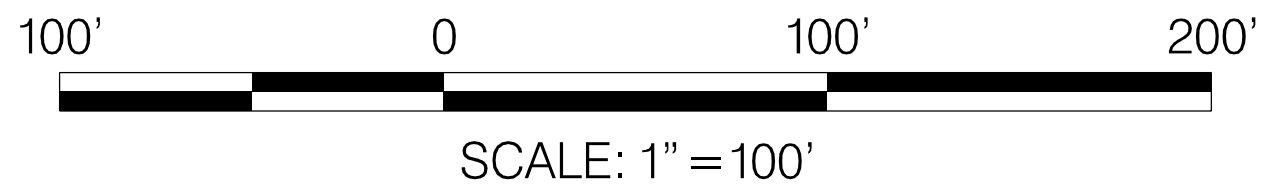
CONSTRUCTION DETAILS:
A. INSTALL PROPOSED INFRARED DETECTOR.

ATM LEGEND					
EXISTING GANTRY SIGN		EXISTING SIGNAL OR ELECTRICAL CABINET		PROPOSED POLE MOUNTED RAMP METER	
EXISTING CANTILEVER SIGN		EXISTING DMS		PROPOSED WIRELESS ANTENNA	
EXISTING FIBER MARKER		EXISTING UTILITY POLE		PROPOSED NETWORK ACCESS POINT	
EXISTING RTMS		PROPOSED GANTRY SIGN		PROPOSED SIGNAL CABINET	
EXISTING RWIS		PROPOSED DMS		PROPOSED INFRARED DETECTOR	
EXISTING HUT		PROPOSED PUCK DETECTOR		PROPOSED FIBER CONDUIT	
EXISTING NIRS		PROPOSED LANE CONTROL SIGNAL		PROPOSED ELECTRICAL CONDUIT	
EXISTING CCTV CAMERA		PROPOSED CCTV CAMERA		PROPOSED FIBER MANHOLE	
EXISTING FIBER MANHOLE		PROPOSED OVERHEAD RAMP METER		PROPOSED ELECTRICAL MANHOLE	
EXISTING MO.CO. CCTV CAMERA		PROPOSED 30' AND 45' CAMERA FOR HSR		OVERHEAD SIGNS AND STRUCTURE TO BE INSTALLED BY OTHERS	
		PROPOSED 30' CAMERA FOR HSR			

CORMAN
CONSTRUCTION

WSP | **PARSONS BRINCKERHOFF**

DRAFT PLANS



DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

REVISIONS

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
INNOVATIVE CONTRACTING DIVISION

I-270 INNOVATIVE CONGESTION MANAGEMENT
MANAGED MOTORWAYS

SEGMENT 1
I-270 – NORTH OF MD 80 (FINGERBOARD RD)

DATE: JANUARY 19, 2017

MM 002 OF 108

PLOTTED: Monday, January 16, 2017 AT 05:51 PM
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