

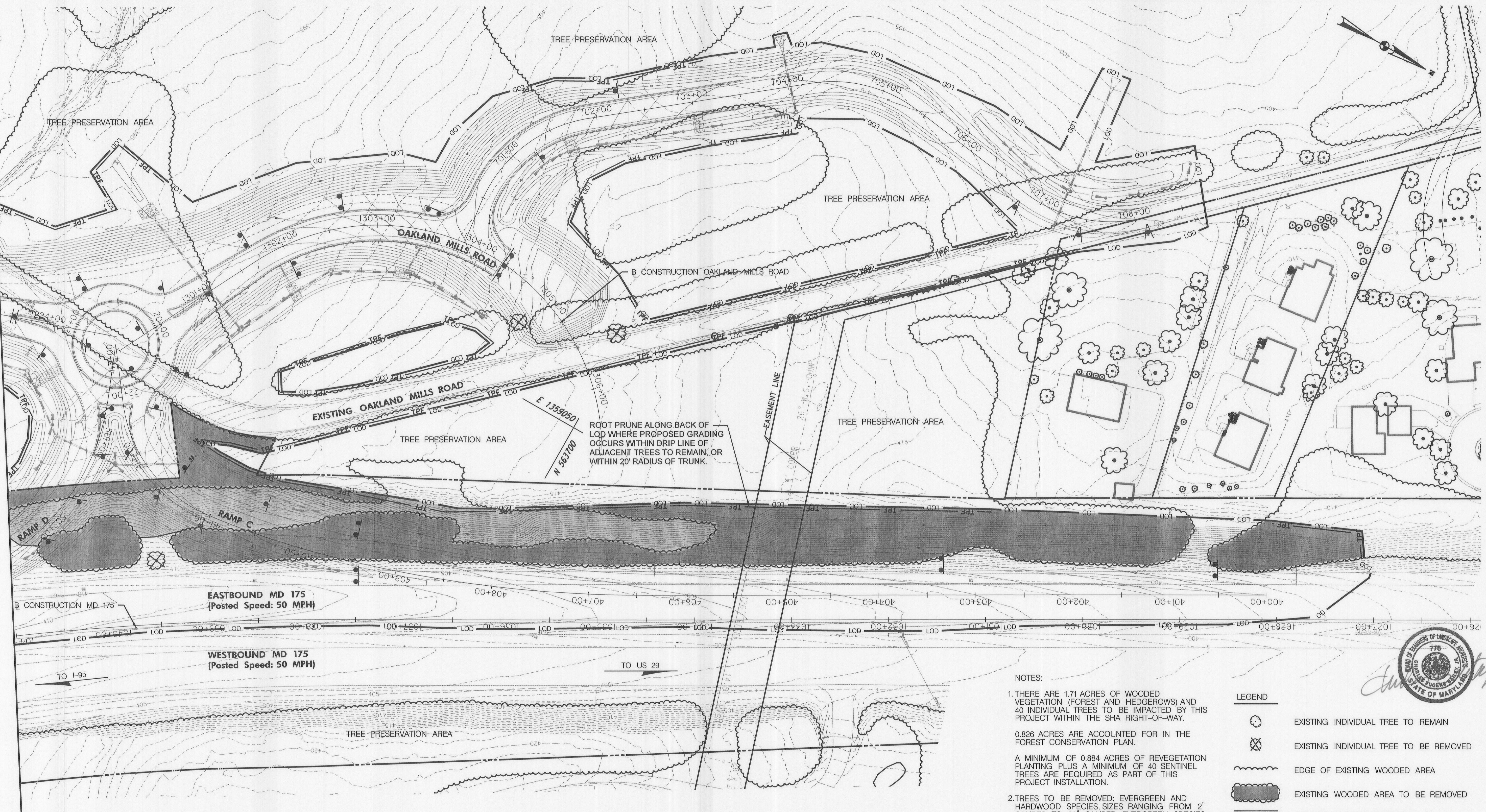
DRILL HOLES

DRILL HOLES

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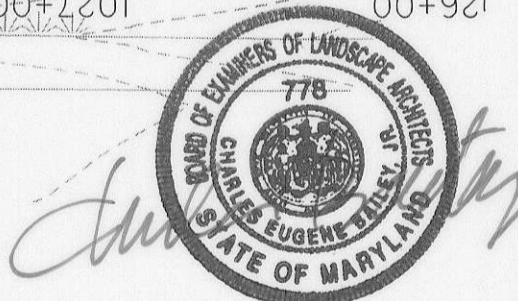
BORDER REV. DATE: JULY 1, 2005

MATCH LINE STA. 121+00 - SEE DRAWING LD-0.1



- NOTES:
- THERE ARE 1.71 ACRES OF WOODED VEGETATION (FOREST AND HEDGEROWS) AND 40 INDIVIDUAL TREES TO BE IMPACTED BY THIS PROJECT WITHIN THE SHA RIGHT-OF-WAY. 0.826 ACRES ARE ACCOUNTED FOR IN THE FOREST CONSERVATION PLAN. A MINIMUM OF 0.884 ACRES OF REVEGETATION PLANTING PLUS A MINIMUM OF 40 SENTINEL TREES ARE REQUIRED AS PART OF THIS PROJECT INSTALLATION.
 - TREES TO BE REMOVED: EVERGREEN AND HARDWOOD SPECIES SIZES RANGING FROM 2" CALIPER TO 20" CALIPER. EVERGREEN SPECIES INCLUDE WHITE PINE AND NORWAY SPRUCE. DECIDUOUS SPECIES INCLUDE MAPLE, OAK, AND LOCUST SPECIES.
 - ROOT PRUNE ALONG TREE PROTECTION FENCING WHERE GRADING OPERATIONS OCCUR WITHIN DRIP LINE OF ADJACENT TREES TO REMAIN, OR WITHIN 20' OF ADJACENT TREE TRUNKS TO REMAIN, WHICHEVER IS GREATER.

LEGEND	
	EXISTING INDIVIDUAL TREE TO REMAIN
	EXISTING INDIVIDUAL TREE TO BE REMOVED
	EDGE OF EXISTING WOODED AREA
	EXISTING WOODED AREA TO BE REMOVED
	EXISTING UNDERSTORY/BRUSH TO BE REMOVED
	TREE PROTECTION FENCING (TEMPORARY ORANGE CONSTRUCTION FENCING)
	AREA OF BRUSH REMOVAL



"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 778, EXPIRATION DATE: 12/20/2015."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

Director of Public Works: *Steve Savan* 7/11/14
 Chief, Bureau of Engineering: *Steve Sharan* 7/11/14
 Chief, Transportation and Special Projects Division: *Steve Sharan* 7/11/14

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

WR&A

MAHAN RYKIEL ASSOCIATES, INC.
The Shell Silver Building, 800 Wyman Park Drive, Suite 1100, Baltimore, MD 21211-6110 (410) 625-6021

DES: CB, NS
 DRN: CO
 CHK: CB
 DATE: 7/11/2014

SHA RIGHT-OF-WAY VEGETATION IMPACT PLANS

BLANDAIR REGIONAL PARK PHASE J - SOUTH
CAPITAL PROJECT # J-4237

TAX MAP 36 BLOCK NO. 5 ELECTION DISTRICT 3/7 HOWARD COUNTY, MARYLAND

DWG. LD-0.2
 SCALE 1" = 50'
 SHEET 101 of 138

BORDER REV. DATE: July 1, 2005

DRILL HOLES

DRILL HOLES

DRILL HOLES

SHA LANDSCAPE NOTES

SHA STANDARD SPECIFICATIONS.

LANDSCAPE CONSTRUCTION AND MATERIALS INSTALLED WITHIN THE MARYLAND STATE HIGHWAY ADMINISTRATION RIGHT OF WAY SHALL CONFORM TO SHA 2008 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, INCLUDING ALL REVISIONS OR SUPPLEMENTS, AND ANY REQUIREMENTS OF THESE NOTES. LANDSCAPE CONSTRUCTION SHALL CONFORM TO SECTIONS 701 THRU 716, AND LANDSCAPE MATERIALS SHALL CONFORM TO SECTION 920. SHA STANDARD SPECIFICATIONS SHALL SUPERSEDE ALL OTHER SPECIFICATIONS FOR WORK WITHIN THE SHA RIGHT OF WAY.

EROSION & SEDIMENT CONTROL MANAGER.

SOIL DISTURBANCE SUCH AS GRADING, EXCAVATION, SOIL PLACEMENT, OR OTHER ACTIVITIES THAT INVOLVE SOIL DISTURBANCE WITHIN THE SHA RIGHT OF WAY SHALL BE SUPERVISED BY AN EROSION AND SEDIMENT CONTROL MANAGER WITH A VALID SHA 'YELLOW CARD' IN CONFORMANCE WITH SHA 2008 SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS AND ANY APPLICABLE EROSION AND SEDIMENT CONTROL PERMIT.

SHA STANDARD DETAILS.

TREE INSTALLATION WITHIN THE SHA RIGHT OF WAY SHALL CONFORM TO SHA STANDARD DETAILS OF THE BOOK OF STANDARDS.

TEMPORARY STABILIZATION.

TEMPORARY MULCH SHALL BE APPLIED IN CONFORMANCE WITH SECTION 704 TO ENSURE THAT AREAS OF SOIL DISTURBANCE ARE PROTECTED FROM RAINFALL AND FLOWING WATER. TEMPORARY STRAW MULCH OR TEMPORARY MATTING MULCH SHALL BE APPLIED TO FLAT AREAS AND SLOPES FLATTER THAN 4:1; TEMPORARY MATTING MULCH SHALL BE APPLIED TO SLOPES 4:1 AND STEEPER WITHIN CHANNELS. TEMPORARY STABILIZATION SHALL BE PERFORMED AT THE END OF EACH WORKING DAY TO PROVIDE 'SAME DAY STABILIZATION' UNLESS OTHER REQUIREMENTS ARE APPROVED.

ROADWAY PAVEMENT REMOVAL.

AREAS OF ROADWAY PAVEMENT REMOVAL WITHIN THE SHA RIGHT OF WAY SHALL BE EXCAVATED TO REMOVE PAVEMENTS, AGGREGATE BASE, AND COMPACTED SOIL TO A MINIMUM DEPTH OF 10 INCHES BELOW THE PAVEMENT SURFACE, OR AS NECESSARY TO REMOVE ALL MATERIALS UNSUITABLE FOR LANDSCAPING. THE EXCAVATED AREAS SHALL BE RESTORED WITH SUBSOIL AND TOPSOIL AS PART OF SOIL RESTORATION.

EXCAVATION AND DEBRIS REMOVAL.

DEBRIS RELATED TO THE DEMOLITION OF SIDEWALKS, DRIVEWAYS, CURBS, TREES, STUMPS, ROOTS, FENCING, PIPES, AND OTHER MATERIALS THAT MAY INTERFERE WITH LANDSCAPE INSTALLATION OR FUTURE MAINTENANCE WITHIN THE SHA RIGHT OF WAY SHALL BE EXCAVATED AS NECESSARY FOR THEIR COMPLETE REMOVAL AND DISPOSAL.

SOIL RESTORATION.

AREAS OF PAVEMENT REMOVAL, EXCAVATION OR DRILLING IN LANDSCAPED AREAS SHALL REMOVE EXCAVATED DEBRIS AND RESTORE THE SUBGRADE WITH APPROVED SUBSOIL AND TOPSOIL PLACED IN CONFORMANCE WITH SECTION 701 OF THE SHA STANDARD SPECIFICATIONS.

1. A LAYER OF APPROVED TOPSOIL AT LEAST 4 INCH DEPTH SHALL BE PLACED ON ALL DISTURBED AREAS FLATTER THAN 4:1 AND IN ALL CHANNELS PRIOR TO SEEDING, SODDING OR OTHER LANDSCAPING, UNLESS OTHERWISE SPECIFIED.
2. BIOPRETENTION SOIL MIX (BSM) SHALL BE INSTALLED IN CONFORMANCE WITH THE PLANS AND PERTINENT SPECIFICATIONS.

TURFGRASS ESTABLISHMENT.

TURFGRASS ESTABLISHMENT SHALL BE PERFORMED IN ALL DISTURBED AREAS OF THE SHA RIGHT OF WAY OR WITHIN THE AREAS INDICATED IN THE PLANS, IN CONFORMANCE WITH SECTION 705 OF THE SHA STANDARD SPECIFICATIONS.

MEADOW ESTABLISHMENT.

MEADOW ESTABLISHMENT OR SHRUB SEEDING ESTABLISHMENT SHALL BE PERFORMED IN AREAS OF THE SHA RIGHT OF WAY AS INDICATED IN THE PLANS, IN CONFORMANCE WITH SECTIONS 706 AND 707 OF THE SHA STANDARD SPECIFICATIONS.

SOIL STABILIZATION MATTING.

SOIL STABILIZATION MATTING SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 709 OF THE SHA STANDARD SPECIFICATIONS IN CONJUNCTION WITH TEMPORARY STABILIZATION PER SECTION 704, OR IN CONJUNCTION WITH TURFGRASS ESTABLISHMENT PER SECTION 705, OR AS SPECIFIED WITHIN THE AREAS INDICATED IN THE PLANS.

1. TURFGRASS ESTABLISHMENT WITH TYPE A OR TYPE E SOIL STABILIZATION MATTING MAY BE INSTALLED IN LIEU OF STRAW MULCH AND HYDROMULCH BINDER FOR PERMANENT STABILIZATION IN AREAS FLATTER THAN 6:1, UNLESS OTHERWISE SPECIFIED.
2. TURFGRASS ESTABLISHMENT WITH TYPE A OR TYPE E SOIL STABILIZATION MATTING SHALL BE INSTALLED IN LIEU OF STRAW MULCH AND HYDROMULCH BINDER FOR PERMANENT STABILIZATION IN AREAS STEEPER THAN 6:1 AND FLATTER THAN 4:1, UNLESS OTHERWISE SPECIFIED.
3. TURFGRASS ESTABLISHMENT WITH TYPE A SOIL STABILIZATION MATTING SHALL BE INSTALLED IN CHANNELS AND ON SLOPES 4:1 AND STEEPER FOR PERMANENT STABILIZATION, UNLESS OTHERWISE SPECIFIED.
4. TYPE D MATTING SHALL BE INSTALLED ON BOTTOM AND SIDE SLOPES OF BIO-SWALES WHERE LOWLAND MEADOW MIX IS SPECIFIED. SEE CIVIL DRAWINGS PS-02 THROUGH PS-07 FOR LOCATIONS. SEE CIVIL DRAWING SW-07 FOR DETAIL.

TREE PRESERVATION AREAS.

TEMPORARY ORANGE CONSTRUCTION FENCE (TOCF) SHOWN ON THE LANDSCAPE PLANS AS TREE PROTECTION FENCING (TPF), SHALL BE INSTALLED IN LOCATIONS DELINEATED ON THE PLANS AS TREE PRESERVATION AREAS (TPA) IN CONFORMANCE WITH SECTION 120 OF THE SHA STANDARD SPECIFICATION TO PROTECT EXISTING TREES AND OTHER VEGETATION DURING CONSTRUCTION. AREAS OF SHA RIGHT OF WAY WITHIN TOCF SHALL BE PROTECTED FROM ALL PROHIBITED AND RESTRICTED ACTIVITIES, AS SPECIFIED IN SECTION 120.

TREES AND OTHER PLANT MATERIAL INSTALLATION.

TREES, SHRUBS, PERENNIALS, ANNUALS, BULBS, LANDSCAPE BEDS AND SIMILAR MATERIALS INSTALLED IN THE SHA RIGHT OF WAY SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 710 AND 711 OF THE SHA STANDARD SPECIFICATIONS. TREES AND SHRUBS SHALL BE PRUNED AT THE TIME OF INSTALLATION TO ENSURE SIDEWALK CLEARANCE FOR PEDESTRIANS IS MAINTAINED TO A HEIGHT OF 8 FEET.

FUTURE MAINTENANCE.

ADDITIONAL MAINTENANCE THAT MAY BE REQUIRED AFTER HARDSCAPE, STREET FURNITURE, OR PLANT MATERIALS ARE INSTALLED AND ACCEPTED BY SHA SUCH AS REPLACEMENT, WATERING, WEEDING, MULCHING OR PEST CONTROL MAY BE PROVIDED BY THE APPLICANT WHEN A PERMIT FOR THE PROPOSED WORK IS ISSUED BY THE SHA DISTRICT OFFICE.



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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

[Signature] 7/15/14
DATE: 7/15/14
CHIEF, BUREAU OF HIGHWAYS

[Signature] 7/16/14
DATE: 7/16/14
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

WR&A

MAHAN RYKIEL
ASSOCIATES INC.
The Small Silver Building, 600 Wyman Park Drive,
Suite 102, Baltimore, MD 21211-4112-2235-8020

DES:	CB, NS				
DRN:	CO				
CHK:	CB				
DATE:	7/16/2014	BY:	NO.	REVISION	DATE

**SHA RIGHT-OF-WAY
VEGETATION IMPACT
PLANS**

**BLANDAIR REGIONAL PARK
PHASE J - SOUTH**

CAPITAL PROJECT # J-4237

ELECTION DISTRICT 3 / 7 HOWARD COUNTY, MARYLAND

DWG.
LD-03

SCALE
1" = 50'

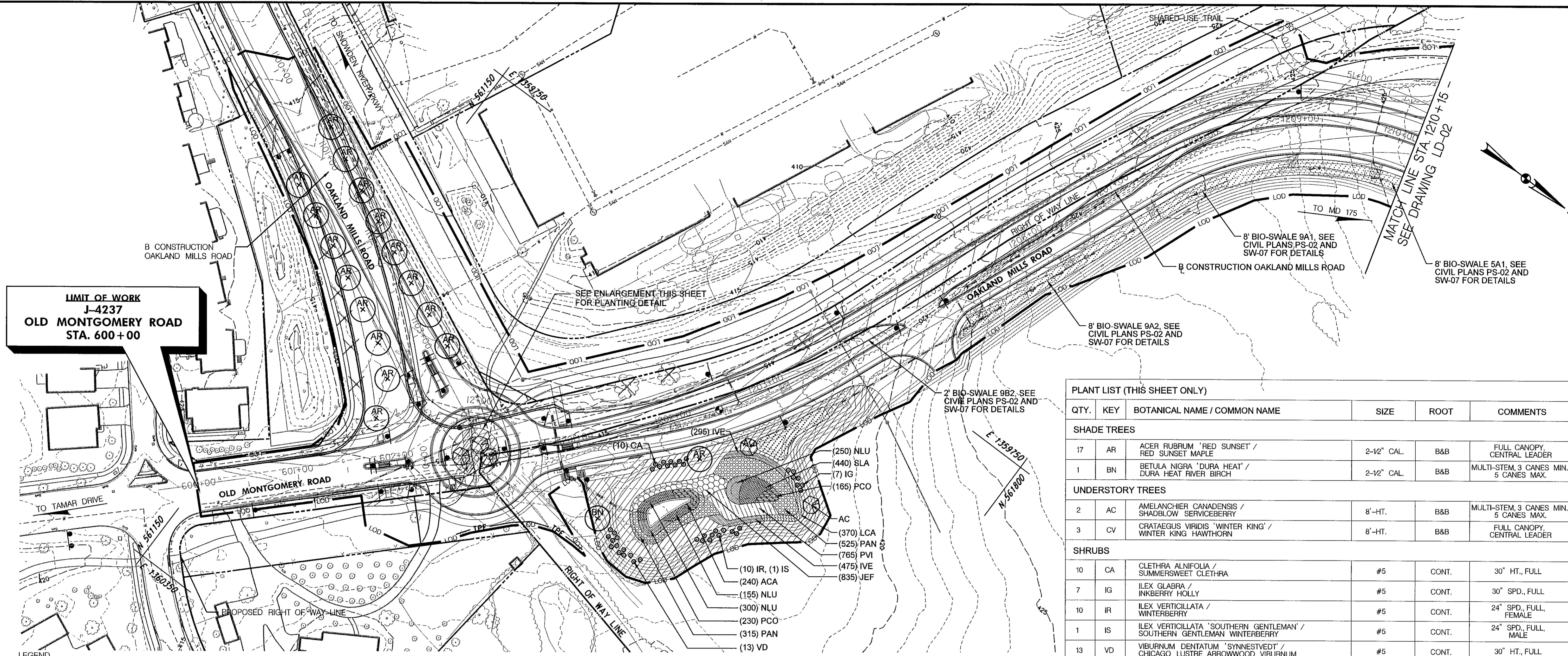
SHEET
102 OF **138**

BORDER REV. DATE: JULY 1, 2005

DRILL HOLES

DRILL HOLES

DRILL HOLES



LIMIT OF WORK
J-4237
OLD MONTGOMERY ROAD
STA. 600+00

LEGEND

	EXISTING TREE TO REMAIN		PROPOSED WOODED EDGE
	EXISTING TREE TO BE REMOVED		LOWLAND MEADOW SEED MIX
	PROPOSED SHADE TREE		UPLAND MEADOW SEED MIX
	PROPOSED UNDERSTORY TREE		REVEGETATION
	PROPOSED EVERGREEN TREE		TREE PROTECTION FENCING (TEMPORARY ORANGE CONSTRUCTION FENCING)
	PROPOSED SHRUB		

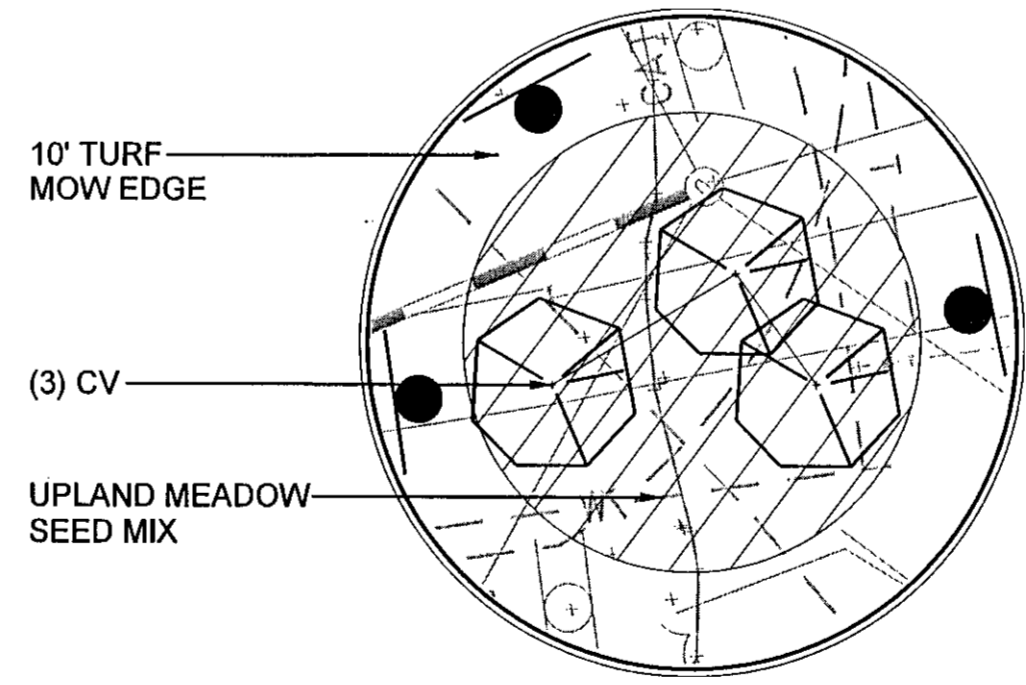
NOTE:

- TURFGRASS ESTABLISHMENT SHALL BE PERFORMED IN ALL DISTURBED AREAS EXCEPT WHERE MEADOW ESTABLISHMENT IS DELINEATED.
- SEE NOTES ON SHEET LD-03 FOR PLANTING WITHIN SHA RIGHT-OF-WAY (ROW). SEE SHEET LD-06 AND HOWARD COUNTY SPECIFICATIONS FOR PLANTING ON COUNTY PROPERTY.
- ROOT PRUNE ALONG TREE PROTECTION FENCING WHERE GRADING OPERATIONS OCCUR WITHIN DRIP LINE OF ADJACENT TREES TO REMAIN, OR WITHIN 20' OF ADJACENT TREE TRUNKS TO REMAIN, WHICHEVER IS GREATER.

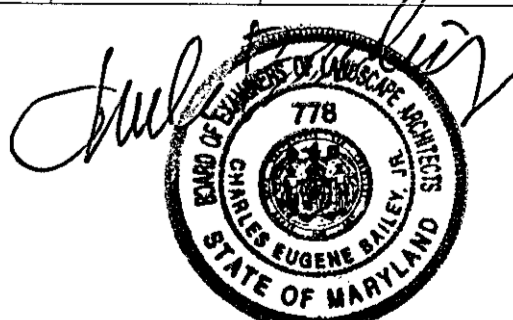
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PLANT LIST (THIS SHEET ONLY)

QTY.	KEY	BOTANICAL NAME / COMMON NAME	SIZE	ROOT	COMMENTS
SHADE TREES					
17	AR	ACER RUBRUM 'RED SUNSET' / RED SUNSET MAPLE	2-12" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
1	BN	BETULA NIGRA 'DURA HEAT' / DURA HEAT RIVER BIRCH	2-12" CAL.	B&B	MULTI-STEM, 3 CANES MIN., 5 CANES MAX.
UNDERSTORY TREES					
2	AC	AMELANCHIER CANADENSIS / SHADBLOW SERVICEBERRY	8'-HT.	B&B	MULTI-STEM, 3 CANES MIN., 5 CANES MAX.
3	CV	CRATAEGUS VIRIDIS 'WINTER KING' / WINTER KING HAWTHORN	8'-HT.	B&B	FULL CANOPY, CENTRAL LEADER
SHRUBS					
10	CA	CLETHRA ALNIFOLIA / SUMMERSWEET CLETHRA	#5	CONT.	30" HT., FULL
7	IG	ILEX GLABRA / INKBERRY HOLLY	#5	CONT.	30" SPD., FULL
10	IR	ILEX VERTICILLATA / WINTERBERRY	#5	CONT.	24" SPD., FULL, FEMALE
1	IS	ILEX VERTICILLATA 'SOUTHERN GENTLEMAN' / SOUTHERN GENTLEMAN WINTERBERRY	#5	CONT.	24" SPD., FULL, MALE
13	VD	VIBURNUM DENTATUM 'SYNNESTVEDT' / CHICAGO LUSTRE ARROWWOOD VIBURNUM	#5	CONT.	30" HT., FULL
HERBACEOUS					
240	ACA	ACORUS CALAMUS / SWEET FLAG	-	PLUG	12" O.C.
770	IVE	IRIS VERSICOLOR / BLUEFLAG IRIS	-	PLUG	15" O.C.
835	JEF	JUNCUS EFFUSUS / SOFT RUSH	-	PLUG	15" O.C.
370	LCA	LOBELIA CARDINALIS / CARDINAL FLOWER	-	PLUG	15" O.C.
705	NLU	NUPHAR LUTEUM / YELLOW WATER LILY	-	PLUG	15" O.C.
840	PAN	PANICUM VIRGATUM 'SHENANDOAH' / SHENANDOAH SWITCHGRASS	#1	CONT.	24" O.C.
765	PVI	PELTANDRA VIRGINICA / ARROW ARUM	-	PLUG	15" O.C.
395	PCO	PONTEDERIA CORDATA / PICKEREL WEED	-	PLUG	15" O.C.
440	SLA	SAGGITARIA LATIFOLIA / DUCK POTATO	-	PLUG	15" O.C.



ROUND ABOUT PLANTING ENLARGEMENT
SCALE: 1" = 20'



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND.

Director of Public Works: *Rafer* 7/15/14
 Chief, Bureau of Highways: *Holger* 7/11/14

Chief, Bureau of Engineering: *Monica & Ruth* 7/11/14
 Chief, Transportation and Special Projects Division: *Steve* 7/11/14

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
 801 South Caroline Street, Baltimore, MD 21231

MAHAN RYKIEL
 ASSOCIATES INC.
 The Staff Silver Building, 400 Wyman Park Drive
 Suite 100, Baltimore, MD 21211 410.235.6001

DES:	CB, NS				
DRN:	CO				
CHK:	CB				
DATE:	7/12/2014	BY:	NO.	REVISION	DATE

LANDSCAPE PLAN

TAX MAP **36** BLOCK NO. **5**

BLANDAIR REGIONAL PARK
PHASE J - SOUTH
CAPITAL PROJECT # J-4237

ELECTION DISTRICT 3 / 7 HOWARD COUNTY, MARYLAND

DWG. **LD-01**

SCALE 1" = 50'

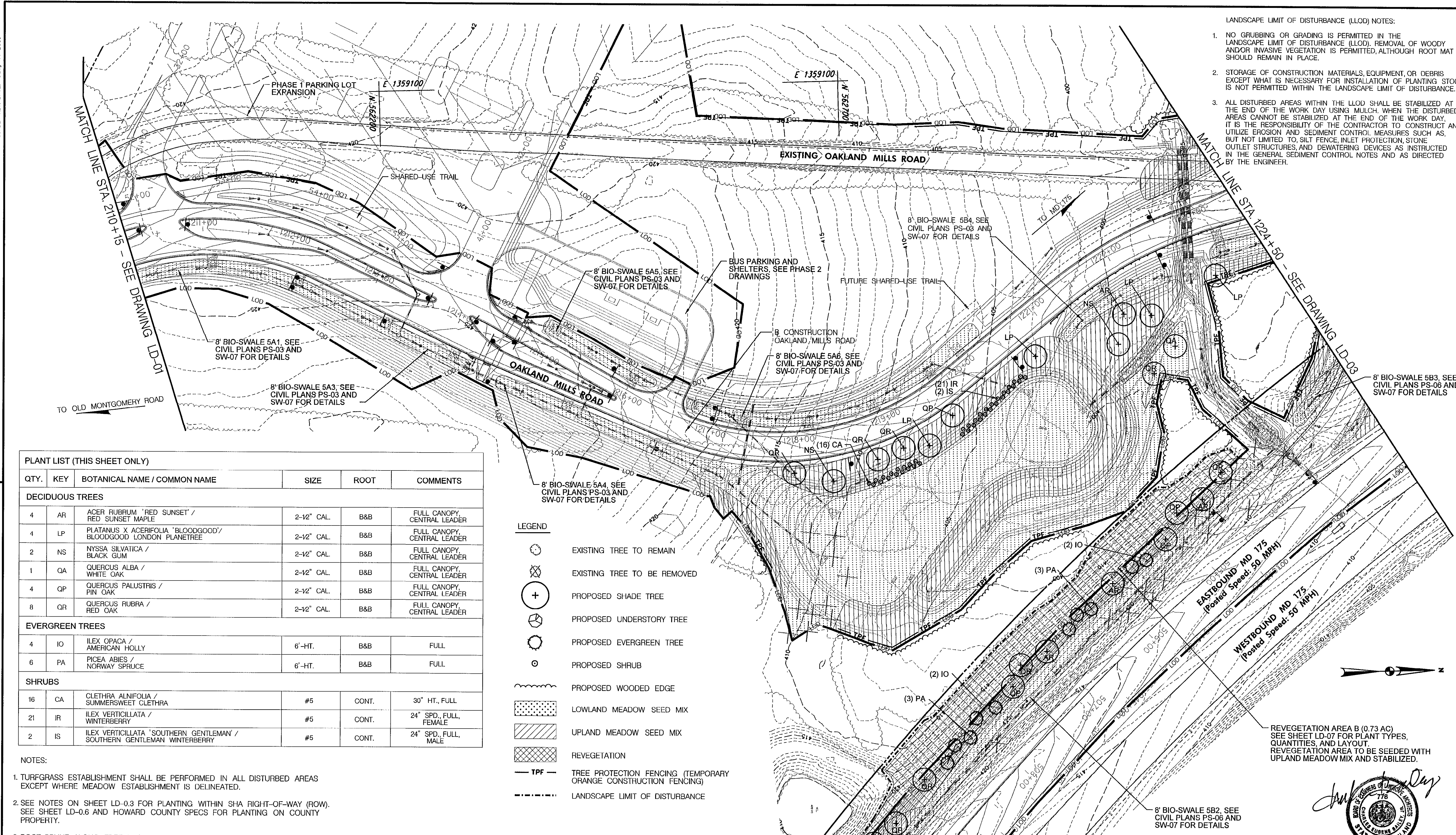
SHEET **103 OF 138**

BORDER REV: DATE: JULY 1, 2005

DRILL HOLES

DRILL HOLES

DRILL HOLES



- LANDSCAPE LIMIT OF DISTURBANCE (LLOD) NOTES:
- NO GRUBBING OR GRADING IS PERMITTED IN THE LANDSCAPE LIMIT OF DISTURBANCE (LLOD). REMOVAL OF WOODY AND/OR INVASIVE VEGETATION IS PERMITTED, ALTHOUGH ROOT MAT SHOULD REMAIN IN PLACE.
 - STORAGE OF CONSTRUCTION MATERIALS, EQUIPMENT, OR DEBRIS EXCEPT WHAT IS NECESSARY FOR INSTALLATION OF PLANTING STOCK IS NOT PERMITTED WITHIN THE LANDSCAPE LIMIT OF DISTURBANCE.
 - ALL DISTURBED AREAS WITHIN THE LLOD SHALL BE STABILIZED AT THE END OF THE WORK DAY USING MULCH. WHEN THE DISTURBED AREAS CANNOT BE STABILIZED AT THE END OF THE WORK DAY, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSTRUCT AND UTILIZE EROSION AND SEDIMENT CONTROL MEASURES SUCH AS, BUT NOT LIMITED TO, SILT FENCE, INLET PROTECTION, STONE OUTLET STRUCTURES, AND DEWATERING DEVICES AS INSTRUCTED IN THE GENERAL SEDIMENT CONTROL NOTES AND AS DIRECTED BY THE ENGINEER.

PLANT LIST (THIS SHEET ONLY)

QTY.	KEY	BOTANICAL NAME / COMMON NAME	SIZE	ROOT	COMMENTS
DECIDUOUS TREES					
4	AR	ACER RUBRUM 'RED SUNSET' / RED SUNSET MAPLE	2-1/2" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
4	LP	PLATANUS X ACERIFOLIA 'BLOODGOOD' / BLOODGOOD LONDON PLANETREE	2-1/2" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
2	NS	NYSSA SILVATICA / BLACK GUM	2-1/2" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
1	QA	QUERCUS ALBA / WHITE OAK	2-1/2" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
4	QP	QUERCUS PALUSTRIS / PIN OAK	2-1/2" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
8	QR	QUERCUS RUBRA / RED OAK	2-1/2" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
EVERGREEN TREES					
4	IO	ILEX OPACA / AMERICAN HOLLY	6'-HT.	B&B	FULL
6	PA	PICEA ABIES / NORWAY SPRUCE	6'-HT.	B&B	FULL
SHRUBS					
16	CA	CLETHRA ALNIFOLIA / SUMMERSWEET CLETHRA	#5	CONT.	30" HT., FULL
21	IR	ILEX VERTICILLATA / WINTERBERRY	#5	CONT.	24" SPD., FULL, FEMALE
2	IS	ILEX VERTICILLATA 'SOUTHERN GENTLEMAN' / SOUTHERN GENTLEMAN WINTERBERRY	#5	CONT.	24" SPD., FULL, MALE

LEGEND

- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- PROPOSED SHADE TREE
- PROPOSED UNDERSTORY TREE
- PROPOSED EVERGREEN TREE
- PROPOSED SHRUB
- PROPOSED WOODED EDGE
- LOWLAND MEADOW SEED MIX
- UPLAND MEADOW SEED MIX
- REVEGETATION
- TREE PROTECTION FENCING (TEMPORARY ORANGE CONSTRUCTION FENCING)
- LANDSCAPE LIMIT OF DISTURBANCE

NOTES:

- TURFGRASS ESTABLISHMENT SHALL BE PERFORMED IN ALL DISTURBED AREAS EXCEPT WHERE MEADOW ESTABLISHMENT IS DELINEATED.
- SEE NOTES ON SHEET LD-0.3 FOR PLANTING WITHIN SHA RIGHT-OF-WAY (ROW). SEE SHEET LD-0.6 AND HOWARD COUNTY SPECS FOR PLANTING ON COUNTY PROPERTY.
- ROOT PRUNE ALONG TREE PROTECTION FENCING WHERE GRADING OPERATIONS OCCUR WITHIN DRIP LINE OF ADJACENT TREES TO REMAIN, OR WITHIN 20' OF ADJACENT TREE TRUNKS TO REMAIN, WHICHEVER IS GREATER.

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 778, EXPIRATION DATE: 12/20/2015."

REVEGETATION AREA B (0.73 AC) SEE SHEET LD-07 FOR PLANT TYPES, QUANTITIES, AND LAYOUT. REVEGETATION AREA TO BE SEEDDED WITH UPLAND MEADOW MIX AND STABILIZED.



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

Director of Public Works: *Ray G. O'Neil* 7/15/14
 Chief, Bureau of Engineering: *Thomas R. Butler* 7/15/14
 Chief, Bureau of Highways: *Hugh Searles* 7/11/14
 Chief, Transportation and Special Projects Division: *Steve Shawar* 7/11/14

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

MAHAN RYKIEL
A S S O C I A T E S I N C
The Great River Building, 1800 Wyman Park Drive
Suite 100, Baltimore, MD 21211 410.835.8001

DES:	CB, NS
DRN:	CO
CHK:	CB
DATE:	7/11/2014
BY:	NO.
REVISION:	
TAX MAP:	36
BLOCK NO.:	5
ELECTION DISTRICT:	3 / 7
HOWARD COUNTY, MARYLAND:	

LANDSCAPE PLAN

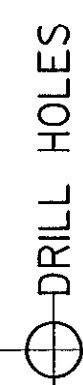
**BLANDAIR REGIONAL PARK
PHASE J - SOUTH**

CAPITAL PROJECT # J-4237

DWG. **LD-02**

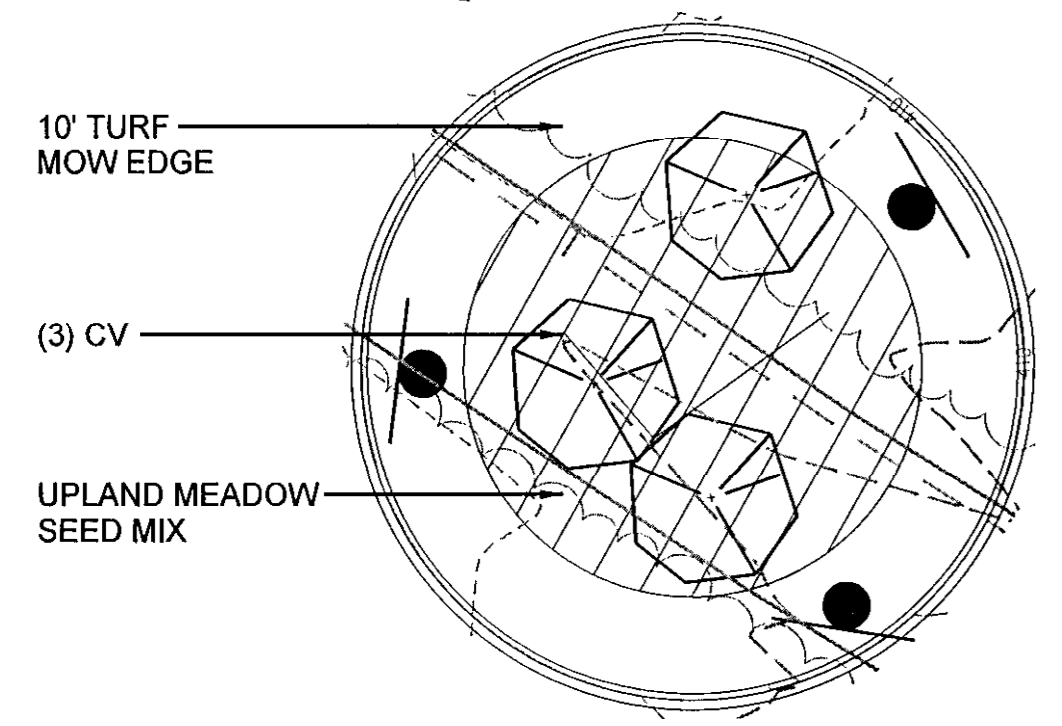
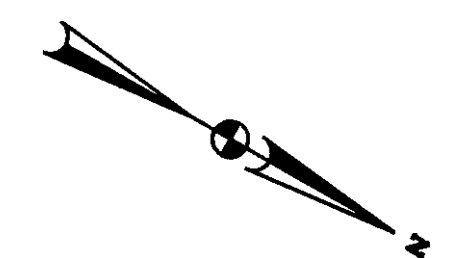
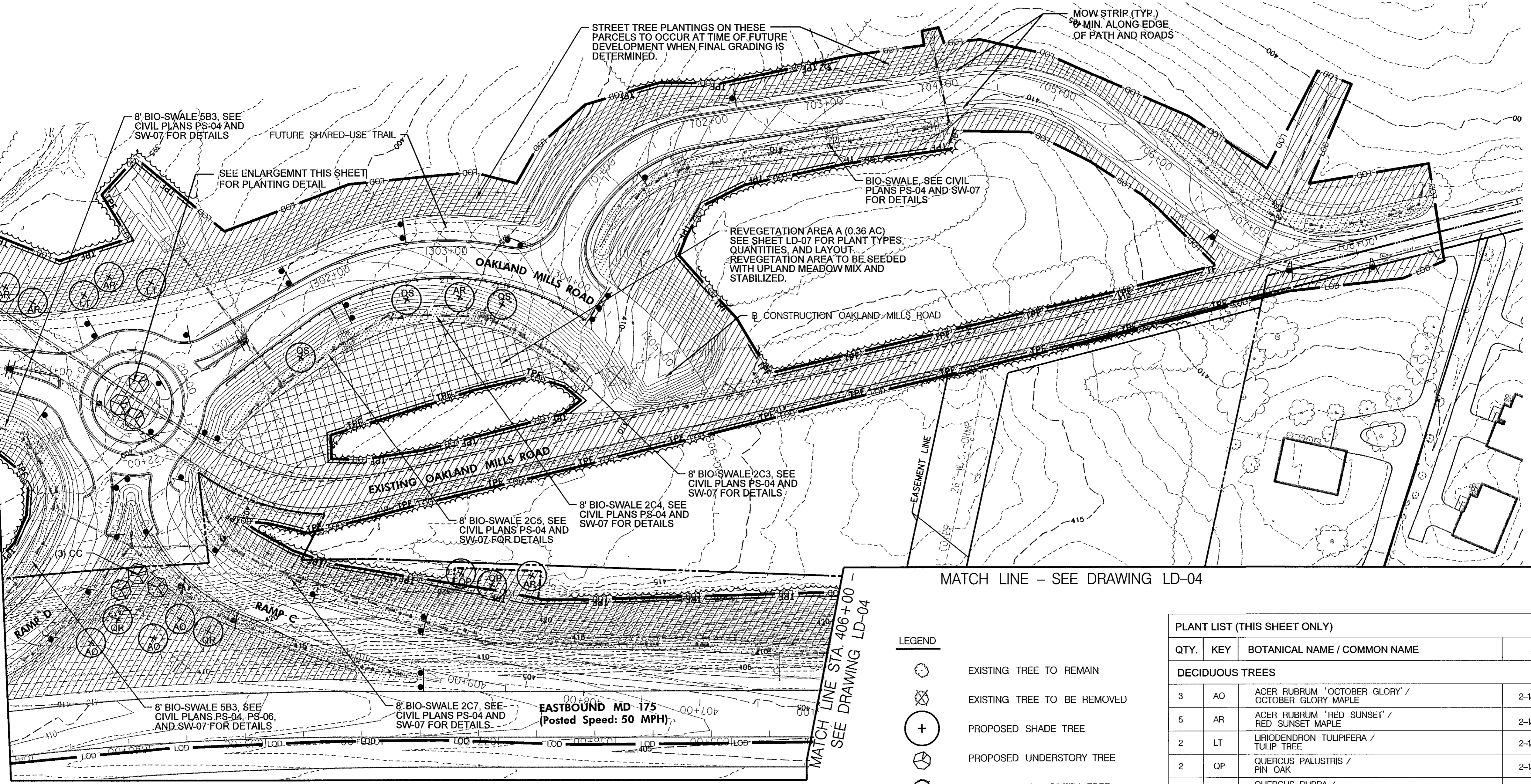
SCALE
1" = 50'

SHEET
104 OF 138



MATCH LINE STA. 121+00 - SEE DRAWING LD-02

MATCH LINE STA. 406+00 - SEE DRAWING LD-04



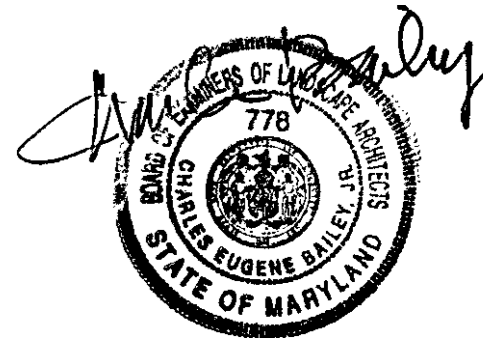
ROUND ABOUT PLANTING ENLARGEMENT
SCALE: 1" = 20'

- LANDSCAPE LIMIT OF DISTURBANCE (LLOD) NOTES:
- NO GRUBBING OR GRADING IS PERMITTED IN THE LANDSCAPE LIMIT OF DISTURBANCE (LLOD). REMOVAL OF WOODY AND/OR INVASIVE VEGETATION IS PERMITTED, ALTHOUGH ROOT MAT SHOULD REMAIN IN PLACE.
 - STORAGE OF CONSTRUCTION MATERIALS, EQUIPMENT, OR DEBRIS EXCEPT WHAT IS NECESSARY FOR INSTALLATION OF PLANTING STOCK IS NOT PERMITTED WITHIN THE LANDSCAPE LIMIT OF DISTURBANCE.
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- LEGEND
- EXISTING TREE TO REMAIN
 - EXISTING TREE TO BE REMOVED
 - PROPOSED SHADE TREE
 - PROPOSED UNDERSTORY TREE
 - PROPOSED EVERGREEN TREE
 - PROPOSED SHRUB
 - PROPOSED WOODED EDGE
 - LOWLAND MEADOW SEED MIX
 - UPLAND MEADOW SEED MIX
 - REVEGETATION
 - TREE PROTECTION FENCING (TEMPORARY ORANGE CONSTRUCTION FENCING)
 - LANDSCAPE LIMIT OF DISTURBANCE

PLANT LIST (THIS SHEET ONLY)					
QTY.	KEY	BOTANICAL NAME / COMMON NAME	SIZE	ROOT	COMMENTS
DECIDUOUS TREES					
3	AO	ACER RUBRUM 'OCTOBER GLORY' / OCTOBER GLORY MAPLE	2-1/2" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
5	AR	ACER RUBRUM 'RED SUNSET' / RED SUNSET MAPLE	2-1/2" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
2	LT	LIRIODENDRON TULIFIFERA / TULIP TREE	2-1/2" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
2	QP	QUERCUS PALUSTRIS / PIN OAK	2-1/2" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
2	QR	QUERCUS RUBRA / NORTHERN RED OAK	2-1/2" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
3	QS	QUERCUS COCCINEA / SCARLET OAK	2-1/2" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
UNDERSTORY TREES					
3	CC	CERCIS CANADENSIS / EASTERN REDBUD	8'-HT.	B&B	MULTI-STEM 3-5 CANES
3	CV	CRATAEGUS VIRIDIS 'WINTER KING' / WINTER KING HAWTHORN	8'-HT.	B&B	FULL CANOPY, CENTRAL LEADER

- NOTES:
- TURFGRASS ESTABLISHMENT SHALL BE PERFORMED IN ALL DISTURBED AREAS EXCEPT WHERE MEADOW ESTABLISHMENT IS DELINEATED.
 - SEE NOTES ON SHEET LD-0.3 FOR PLANTING WITHIN SHA RIGHT-OF-WAY (ROW). SEE SHEET LD-0.6 AND HOWARD COUNTY SPECS FOR PLANTING ON COUNTY PROPERTY.
 - ROOT PRUNE ALONG TREE PROTECTION FENCING WHERE GRADING OPERATIONS OCCUR WITHIN DRIP LINE OF ADJACENT TREES TO REMAIN, OR WITHIN 20' OF ADJACENT TREE TRUNKS TO REMAIN, WHICHEVER IS GREATER.



"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 778, EXPIRATION DATE: 12/20/2015."

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

MAHAN RYKIEL
ASSOCIATES, INC.
The Shell Tower Building, 820 Wyman Park Drive,
Suite 100, Baltimore, MD 21211 410.235.6001

DES: CB, NS
DRN: CO
CHK: CB
DATE: 7/1/2014

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

Director of Public Works: *Ray Oke* 7/15/14
Chief, Bureau of Engineering: *Mamas & Butler* 7/15/14
Chief, Bureau of Highways: *Halton Sevano* 7/15/14
Chief, Transportation and Special Projects Division: *Steve Shavan* 7/15/14

LANDSCAPE PLAN

TAX MAP 36 BLOCK NO. 5 ELECTION DISTRICT 3/7 HOWARD COUNTY, MARYLAND

**BLANDAIR REGIONAL PARK
PHASE J - SOUTH**

CAPITAL PROJECT # J-4237

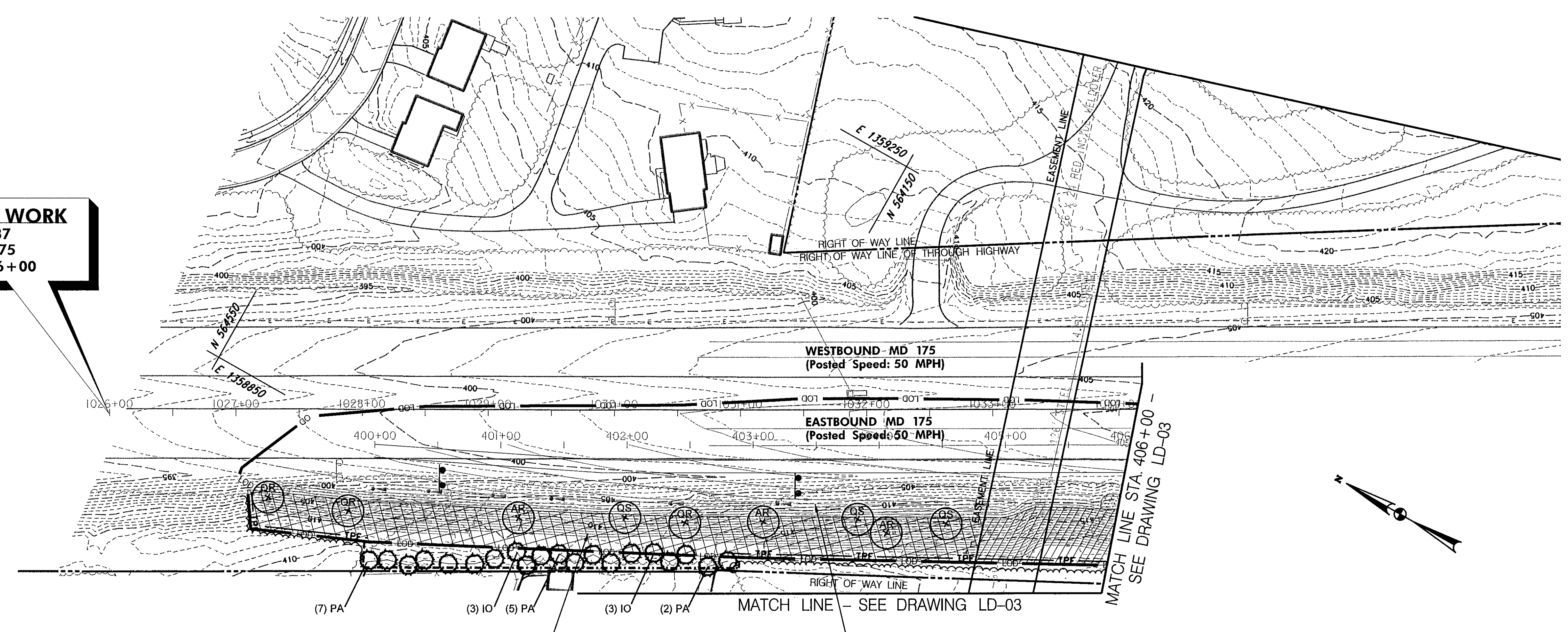
DRILL HOLES

DRILL HOLES

DRILL HOLES

BORDER REV. DATE: JULY 1, 2005

LIMIT OF WORK
J-4237
MD 175
STA. 1026+00



REVEGETATION AREA D (0.43 AC)
SEE SHEET LD-07 FOR PLANT TYPES,
QUANTITIES, AND LAYOUT.
REVEGETATION AREA TO BE SEEDED
WITH UPLAND MEADOW MIX.

2' GRASS SWALE 7A, SEE
CIVIL PLANS PS-05 AND
SW-07 FOR DETAILS

PLANT LIST (THIS SHEET ONLY)					
QTY.	KEY	BOTANICAL NAME / COMMON NAME	SIZE	ROOT	COMMENTS
DECIDUOUS TREES					
3	AR	ACER RUBRUM 'RED SUNSET' / RED SUNSET MAPLE	2-12" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
3	QR	QUERCUS RUBRA / NORTHERN RED OAK	2-12" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
3	QS	QUERCUS COCCINEA / SCARLET OAK	2-12" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
EVERGREEN TREES					
6	IO	ILEX OPACA / AMERICAN HOLLY	6'-HT.	B&B	FULL
14	PA	PICEA ABIES / NORWAY SPRUCE	6'-HT.	B&B	FULL

NOTES:

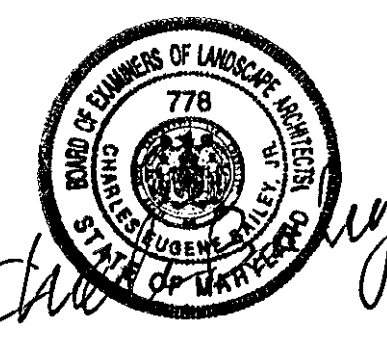
- TURFGRASS ESTABLISHMENT SHALL BE PERFORMED IN ALL DISTURBED AREAS EXCEPT WHERE MEADOW ESTABLISHMENT IS DELINEATED.
- SEE NOTES ON SHEET LD-0.3 FOR PLANTING WITHIN SHA RIGHT-OF-WAY (ROW), SEE SHEET LD-0.6 AND HOWARD COUNTY SPECS FOR PLANTING ON COUNTY PROPERTY.
- ROOT PRUNE ALONG TREE PROTECTION FENCING WHERE GRADING OPERATIONS OCCUR WITHIN DRIP LINE OF ADJACENT TREES TO REMAIN, OR WITHIN 20' OF ADJACENT TREE TRUNKS TO REMAIN, WHICHEVER IS GREATER.

LANDSCAPE LIMIT OF DISTURBANCE (LLOD) NOTES:

- NO GRUBBING OR GRADING IS PERMITTED IN THE LANDSCAPE LIMIT OF DISTURBANCE (LLOD). REMOVAL OF WOODY AND/OR INVASIVE VEGETATION IS PERMITTED, ALTHOUGH ROOT MAT SHOULD REMAIN IN PLACE.
- STORAGE OF CONSTRUCTION MATERIALS, EQUIPMENT, OR DEBRIS EXCEPT WHAT IS NECESSARY FOR INSTALLATION OF PLANTING STOCK IS NOT PERMITTED WITHIN THE LANDSCAPE LIMIT OF DISTURBANCE.
- ALL DISTURBED AREAS WITHIN THE LLOD SHALL BE STABILIZED AT THE END OF THE WORK DAY USING MULCH. WHEN THE DISTURBED AREAS CANNOT BE STABILIZED AT THE END OF THE WORK DAY, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSTRUCT AND UTILIZE EROSION AND SEDIMENT CONTROL MEASURES SUCH AS, BUT NOT LIMITED TO, SILT FENCE, INLET PROTECTION, STONE OUTLET STRUCTURES, AND DEWATERING DEVICES AS INSTRUCTED IN THE GENERAL SEDIMENT CONTROL NOTES AND AS DIRECTED BY THE ENGINEER.

LEGEND

- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- PROPOSED SHADE TREE
- PROPOSED UNDERSTORY TREE
- PROPOSED EVERGREEN TREE
- PROPOSED SHRUB
- PROPOSED WOODED EDGE
- LOWLAND MEADOW SEED MIX
- UPLAND MEADOW SEED MIX
- REVEGETATION
- TREE PROTECTION FENCING (TEMPORARY ORANGE CONSTRUCTION FENCING)
- LANDSCAPE LIMIT OF DISTURBANCE



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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

Ray J. Van Nishe 7/11/14
DIRECTOR OF PUBLIC WORKS DATE

Alger Sessano 7/11/14
CHIEF, BUREAU OF HIGHWAYS DATE

Mona B. Butler 7/11/14
CHIEF, BUREAU OF ENGINEERING DATE

Steve Shanan 7/11/14
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE

PREPARED BY:
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801 South Caroline Street, Baltimore, MD 21231

MAHAN RYKIEL
ASSOCIATE IN CHARGE
The Staff Tower Building, 800 Wyman Park Drive
Suite 100, Baltimore, MD 21211 410.235.8001

WR&A

DES:	CB, NS				
DRN:	CO				
CHK:	CB				
DATE:	7/11/2014	BY:	NO.	REVISION:	

LANDSCAPE PLAN

TAX MAP 36 BLOCK NO. 5

**BLANDAIR REGIONAL PARK
PHASE J - SOUTH**

CAPITAL PROJECT # J-4237

ELECTION DISTRICT 3/7 HOWARD COUNTY, MARYLAND

DWG. LD-04

SCALE 1" = 50'

SHEET 106 OF 138

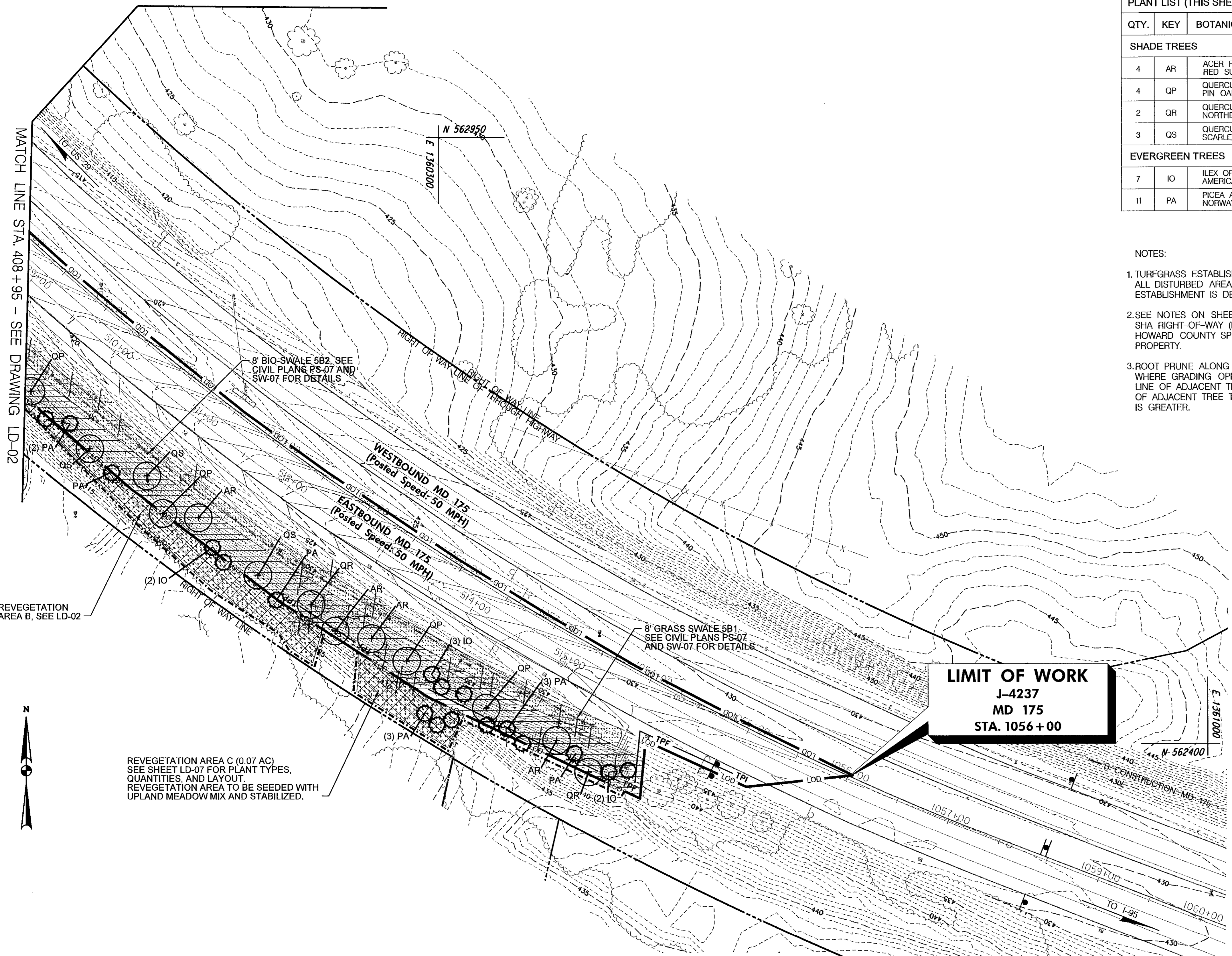
SHA SHEET 60 OF 76

BORDER REV. DATE: JULY 11, 2005

DRILL HOLES

DRILL HOLES

DRILL HOLES



PLANT LIST (THIS SHEET ONLY)					
QTY.	KEY	BOTANICAL NAME / COMMON NAME	SIZE	ROOT	COMMENTS
SHADE TREES					
4	AR	ACER RUBRUM 'RED SUNSET' / RED SUNSET MAPLE	2-1/2" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
4	QP	QUERCUS PALUSTRIS / PIN OAK	2-1/2" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
2	QR	QUERCUS RUBRA / NORTHERN RED OAK	2-1/2" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
3	QS	QUERCUS COCCINEA / SCARLET OAK	2-1/2" CAL.	B&B	FULL CANOPY, CENTRAL LEADER
EVERGREEN TREES					
7	IO	ILEX OPACA / AMERICAN HOLLY	6'-HT.	B&B	FULL
11	PA	PICEA ABIES / NORWAY SPRUCE	6'-HT.	B&B	FULL

- NOTES:
- TURFGRASS ESTABLISHMENT SHALL BE PERFORMED IN ALL DISTURBED AREAS EXCEPT WHERE MEADOW ESTABLISHMENT IS DELINEATED.
 - SEE NOTES ON SHEET LD-03 FOR PLANTING WITHIN SHA RIGHT-OF-WAY (ROW). SEE SHEET LD-06 AND HOWARD COUNTY SPECS FOR PLANTING ON COUNTY PROPERTY.
 - ROOT PRUNE ALONG TREE PROTECTION FENCING WHERE GRADING OPERATIONS OCCUR WITHIN DRIP LINE OF ADJACENT TREES TO REMAIN, OR WITHIN 20' OF ADJACENT TREE TRUNKS TO REMAIN, WHICHEVER IS GREATER.

LEGEND	
	EXISTING TREE TO REMAIN
	EXISTING TREE TO BE REMOVED
	PROPOSED SHADE TREE
	PROPOSED UNDERSTORY TREE
	PROPOSED EVERGREEN TREE
	PROPOSED SHRUB
	PROPOSED WOODED EDGE
	LOWLAND MEADOW SEED MIX
	UPLAND MEADOW SEED MIX
	REVEGETATION
	TREE PROTECTION FENCING (TEMPORARY ORANGE CONSTRUCTION FENCING)
	LANDSCAPE LIMIT OF DISTURBANCE

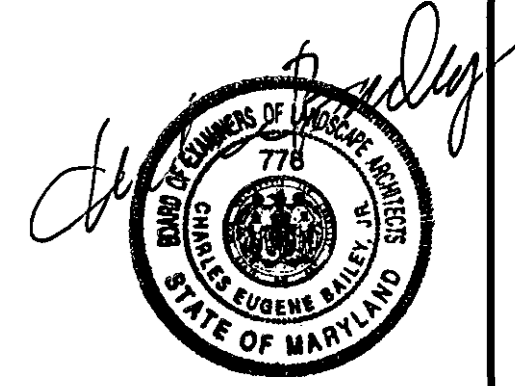
- LANDSCAPE LIMIT OF DISTURBANCE (LLOD) NOTES:
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REVEGETATION AREA C (0.07 AC)
SEE SHEET LD-07 FOR PLANT TYPES, QUANTITIES, AND LAYOUT.
REVEGETATION AREA TO BE SEEDED WITH UPLAND MEADOW MIX AND STABILIZED.

REVEGETATION AREA B, SEE LD-02

LIMIT OF WORK
J-4237
MD 175
STA. 1056+00

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 778, EXPIRATION DATE: 12/20/2015."



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

Director of Public Works: *[Signature]* 7/15/14
 Chief, Bureau of Engineering: *[Signature]* 7/11/14
 Chief, Bureau of Highways: *[Signature]* 7-11-14

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

WR&A

MAHAN RYKIEL
ASSOCIATES INC.
The Sheff Silver Building, 603 Wyman Park Drive, Suite 100, Baltimore, MD 21211 410.935.6001

DES: CB, NS
DRN: CO
CHK: CB
DATE: 7/11/2014

LANDSCAPE PLAN

**BLANDAIR REGIONAL PARK
PHASE J - SOUTH**

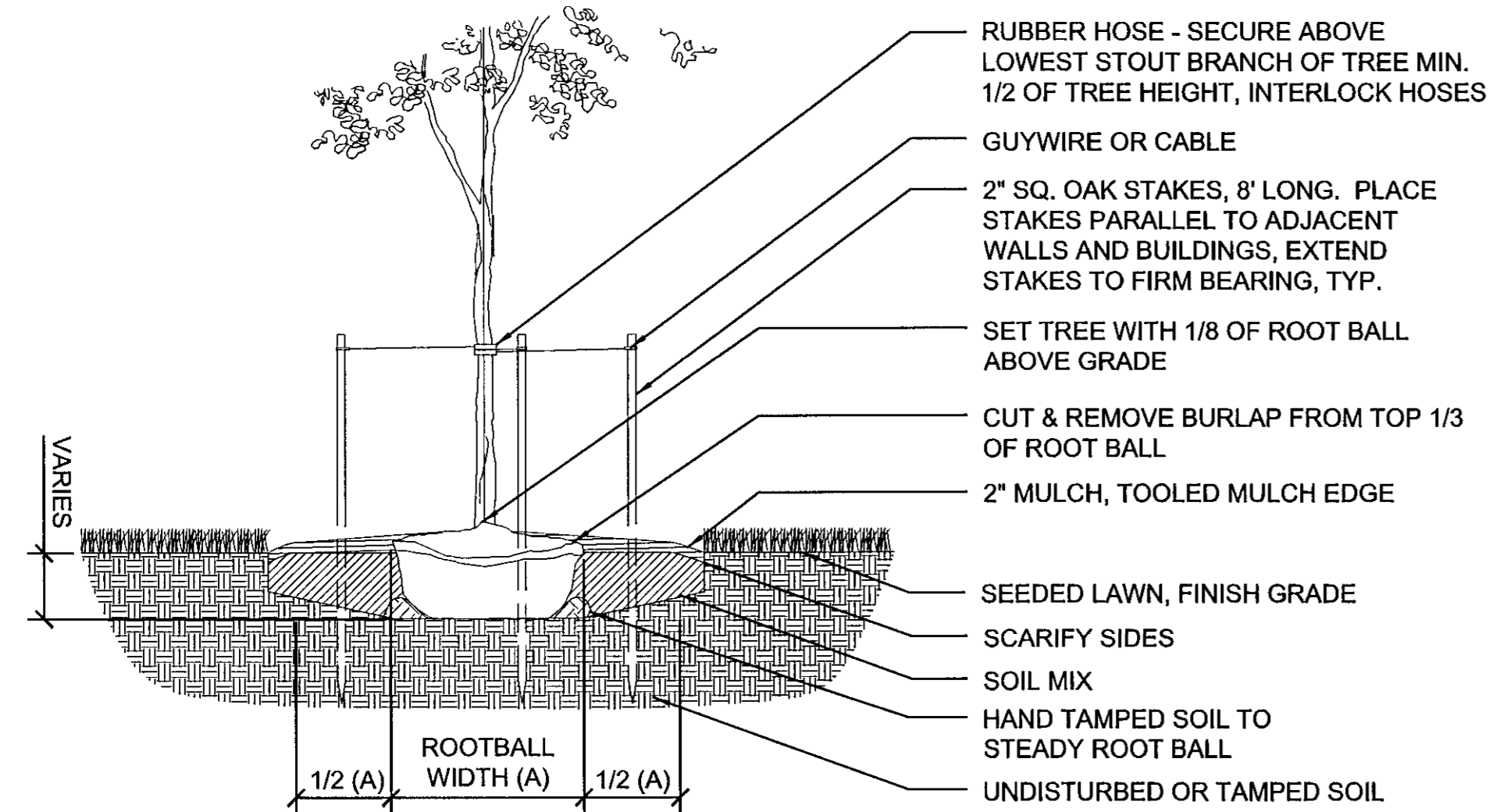
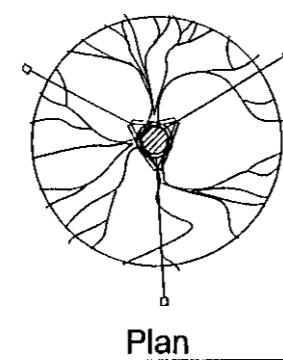
CAPITAL PROJECT # J-4237

TAX MAP 36 BLOCK NO. 5 ELECTION DISTRICT 3/7 HOWARD COUNTY, MARYLAND

DWG. LD-05
SCALE 1" = 50'
SHEET 107 OF 138
SHA SHEET 61 OF 76

Notes:

- 1. DO NOT CUT CENTRAL LEADER.
- 2. FOR PLANTS IN WIRE BASKETS, REFER TO SPECIFICATIONS.
- 3. DO NOT PLACE MULCH AGAINST TRUNK.
- 4. TREES TO HAVE SINGLE LEADER.
- 5. CUT AND REMOVE TOP HALF OF WIRE BASKETS.

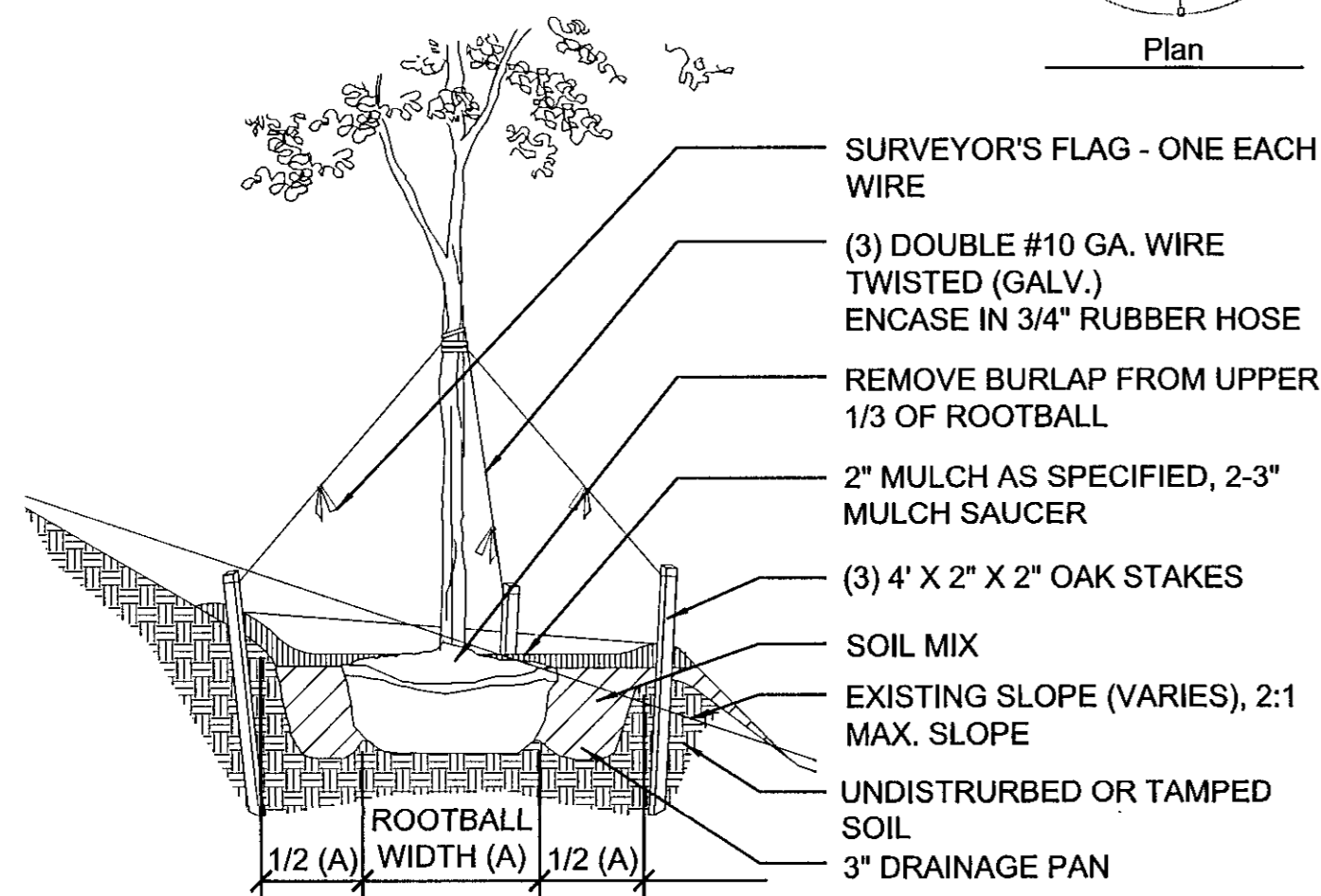
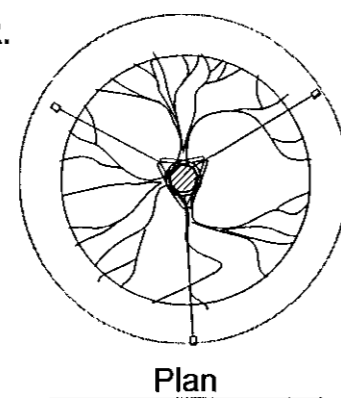


1 Typical Deciduous Tree Planting

Scale: 1/2" = 1'-0"

Notes:

- 1. NEVER CUT CENTRAL LEADER.
- 2. NEVER MULCH AGAINST TRUNK.
- 3. SET TREE WITH 1/8 OF ROOT BALL ABOVE GRADE.
- 4. STAKES, WIRES, AND HOSES SHALL BE REMOVED AFTER ONE YEAR.
- 5. SCARIFY SUBSOIL AND SIDES OF TREE PIT TO A MIN. OF 4" DEPTH.
- 6. TREES UNDER 2-1/2" CAL.: 10' x 2" x 2" STAKES SET VERTICAL, MIN. TWO FEET INTO COMPACTED SUBGRADE.
- 7. TREES TO HAVE SINGLE LEADER.
- 8. CUT AND REMOVE TOP HALF OF WIRE BASKETS.

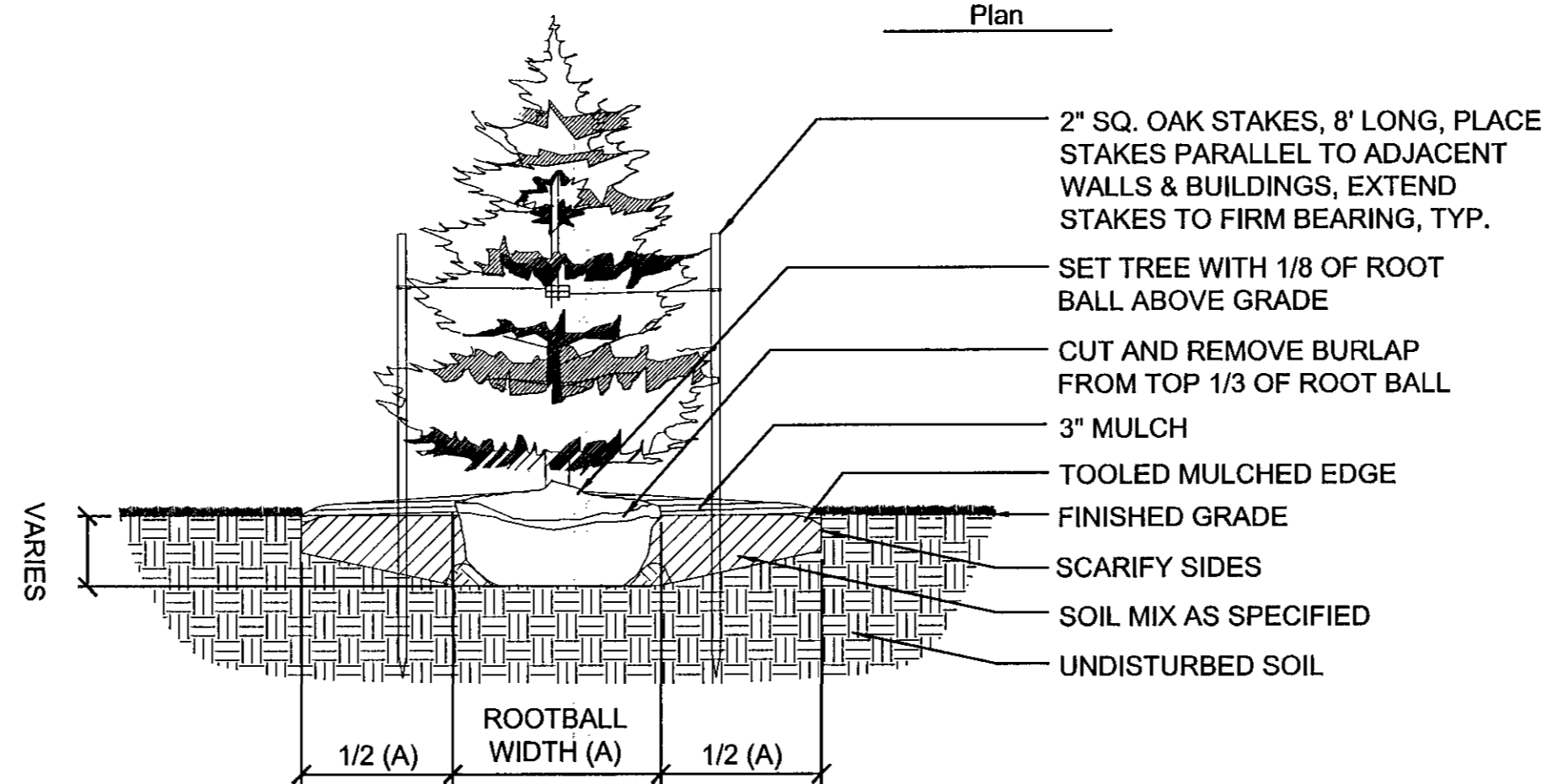
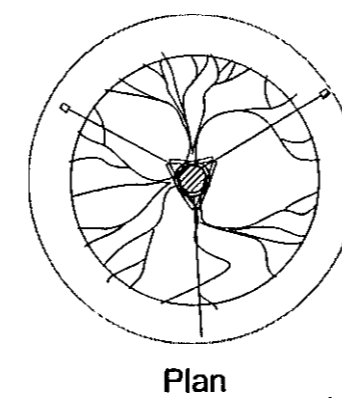


4 Typical Deciduous Tree Planting on Slope

Scale: 1/2" = 1'-0"

Notes:

- 1. NEVER CUT CENTRAL LEADER.
- 2. FOR PLANTS IN WIRE BASKETS, REFER TO SPECIFICATIONS.
- 3. TREES TO HAVE SINGLE LEADER.
- 4. CUT AND REMOVE TOP HALF OF WIRE BASKETS.
- 5. DO NOT PLACE MULCH AGAINST TRUNK.

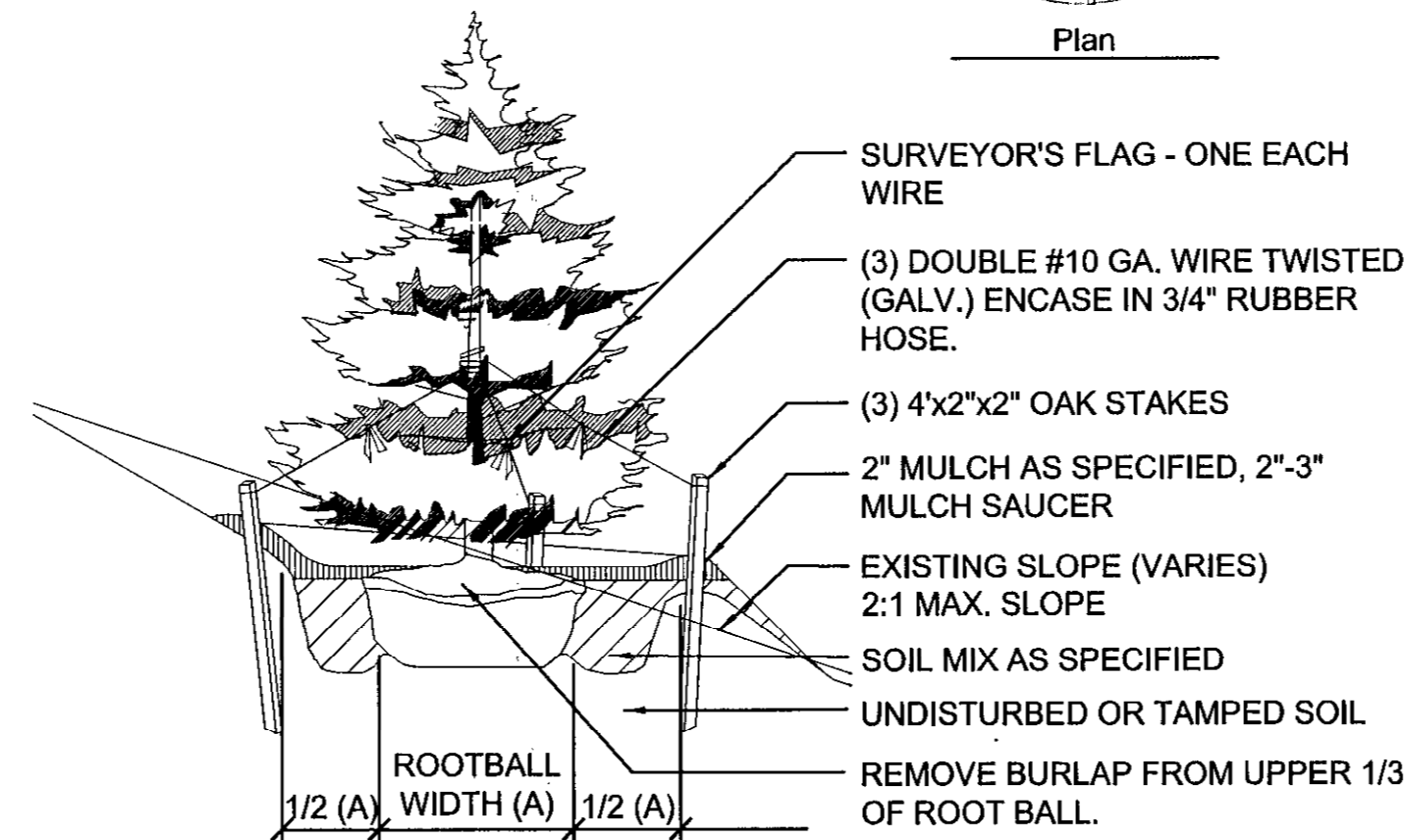
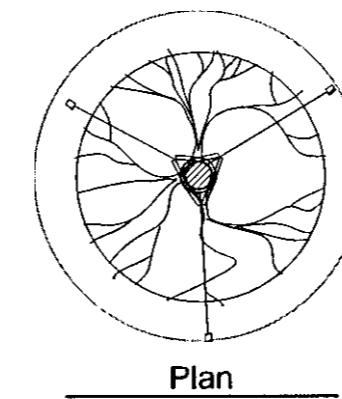


2 Typical Evergreen Tree Planting

Scale: 1/2" = 1'-0"

Notes:

- 1. NEVER CUT CENTRAL LEADER.
- 2. FOR PLANTS IN WIRE BASKETS, REFER TO SPECIFICATIONS.
- 3. DO NOT PLACE MULCH AGAINST TRUNK.
- 4. TREES TO HAVE SINGLE LEADER.
- 5. CUT AND REMOVE TOP HALF OF WIRE BASKETS.

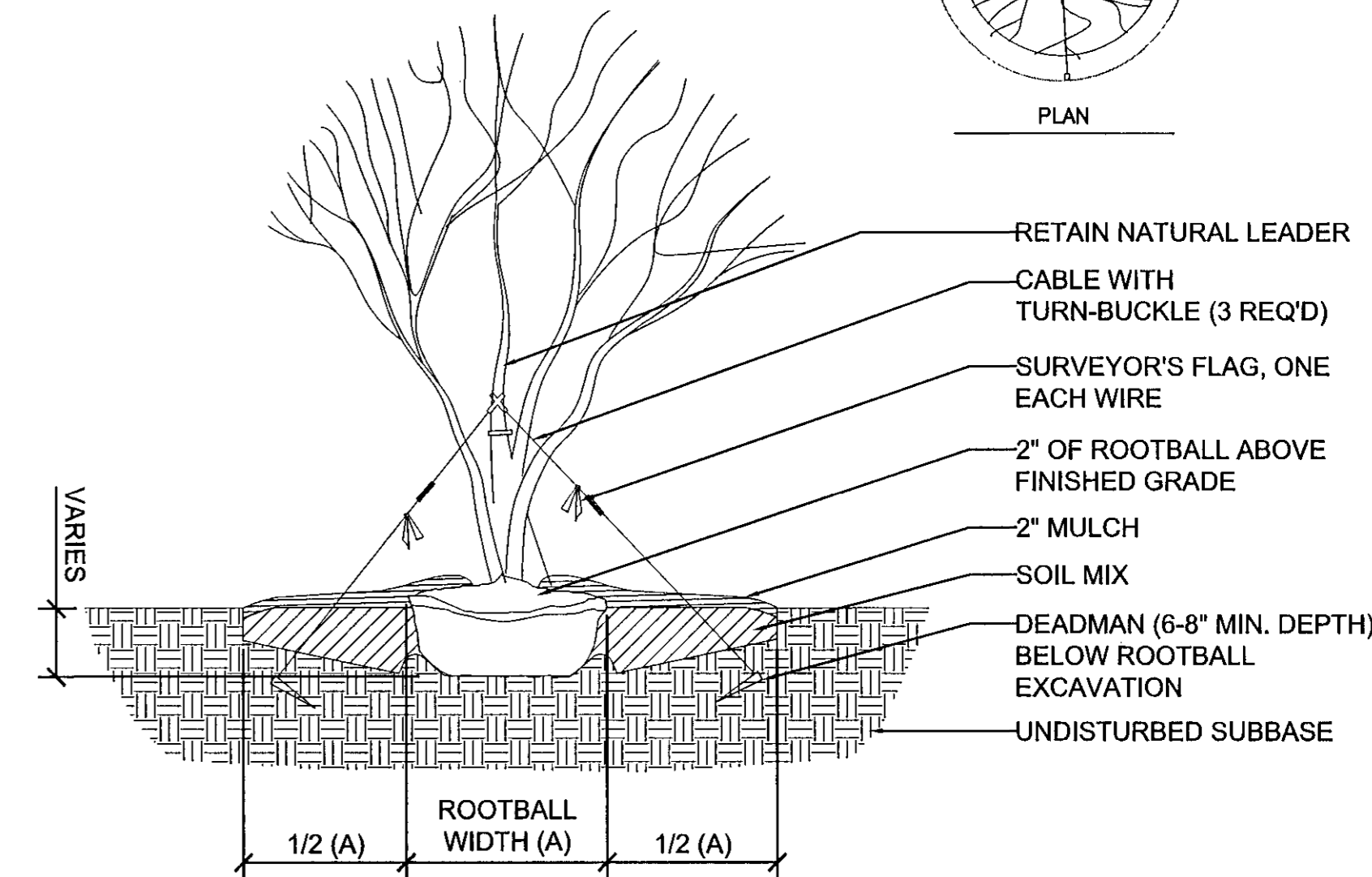
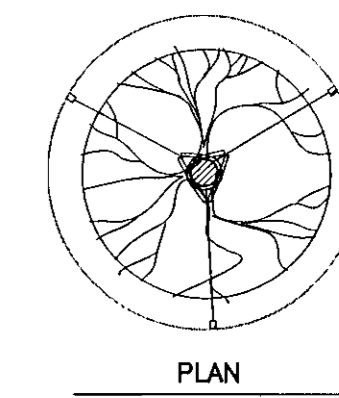


5 Typical Evergreen Tree Planting on Slope

Scale: 1/2" = 1'-0"

Notes:

- 1. FOR B&B TREES, REMOVE TOP 1/3 OF BALL WRAP.
- 2. CUT WIRE BASKET IN AT LEAST FOUR LOCATIONS CIRCLING ROOTBALL.
- 3. DO NOT PLACE MULCH AGAINST TRUNK.

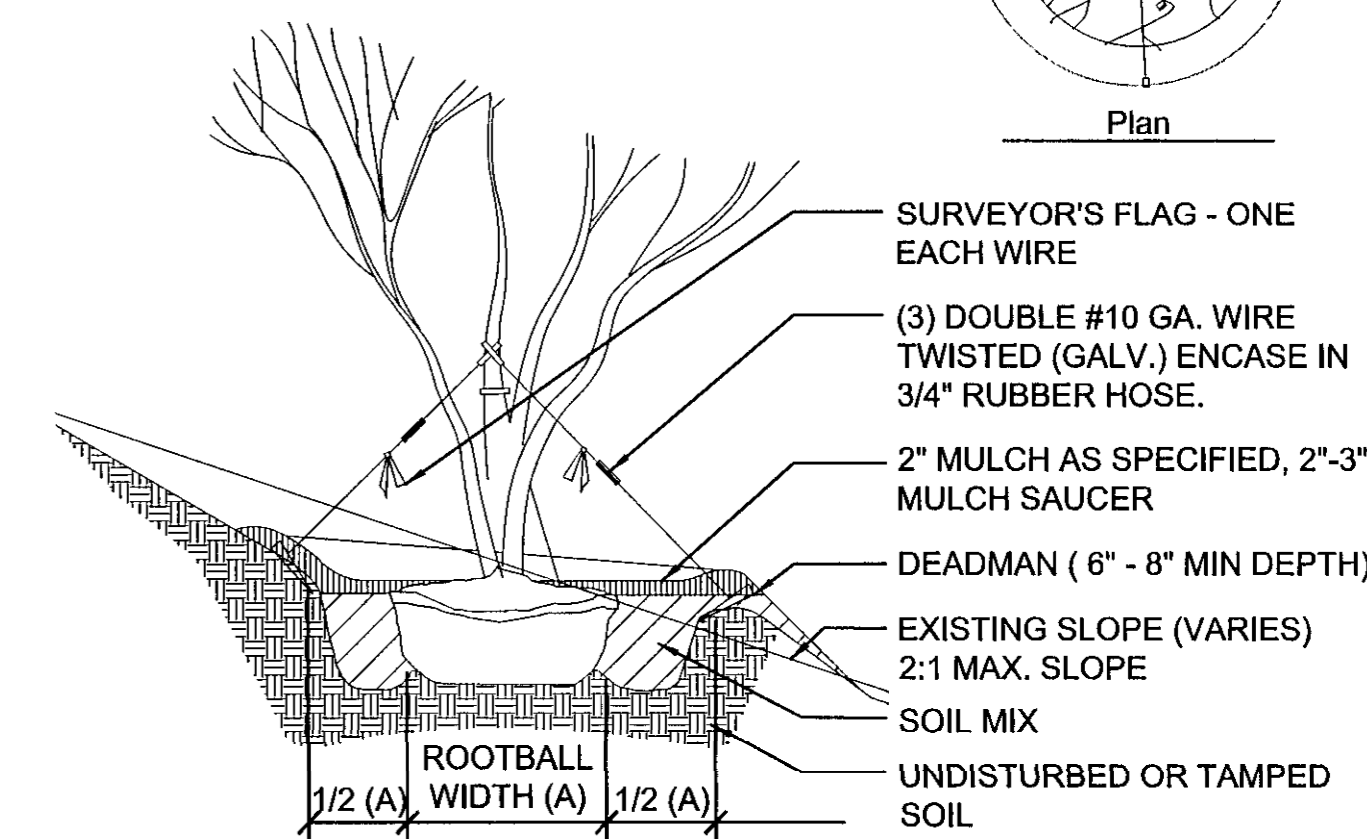
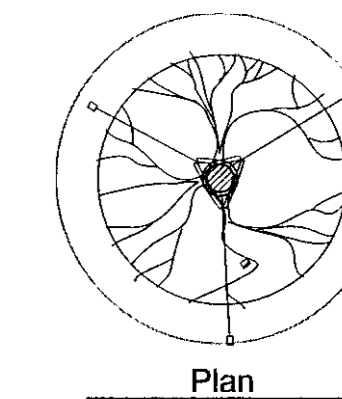


3 Typical Flowering Tree Planting

Scale: 1/2" = 1'-0"

Notes:

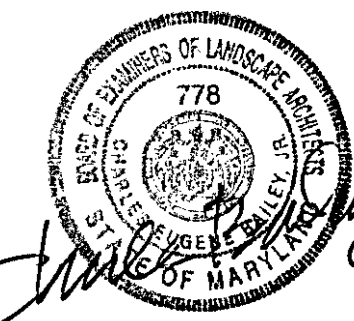
- 1. FOR B&B TREES, REMOVE TOP 1/3 OF BALL WRAP.
- 2. CUT WIRE BASKET IN AT LEAST FOUR LOCATIONS CIRCLING ROOTBALL.
- 3. DO NOT PLACE MULCH AGAINST TRUNK.



6 Typical Flowering Tree Planting on Slope

Scale: 1/2" = 1'-0"

NOTE: PLANTING DETAILS FOR PLANTINGS ON HOWARD COUNTY PROPERTY ONLY. PLANTINGS WITHIN SHA ROW TO FOLLOW NOTES ON SHEET LD-0.3 AND SHA SPECIFICATIONS.



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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

[Signature] 7/16/14
DIRECTOR OF PUBLIC WORKS DATE

[Signature] 7/16/14
CHIEF, BUREAU OF HIGHWAYS DATE

[Signature] 7/16/14
CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 7/16/14
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

WR&A

MAHAN RYKIEL
A S O C I A T E S I N C
The Bluff Tower Building, 800 Wyman Park Drive, Suite 100, Baltimore, MD 21211 410.239.9001

DES: CB, NS
DRN: CO
CHK: CB
DATE: 7/11/2014

LANDSCAPE DETAILS

TAX MAP 36
BLOCK NO. 5

**BLANDAIR REGIONAL PARK
PHASE J - SOUTH**

CAPITAL PROJECT # J-4237

ELECTION DISTRICT 3 / 7
HOWARD COUNTY, MARYLAND

DWG. LD-06
SCALE 1" = 50'
SHEET 108 OF 138
SHA SHEET 62 OF 76

MASTER PLANT PALETTE					
QTY.	KEY	BOTANICAL NAME / COMMON NAME	SIZE	ROOT	COMMENTS
SHADE TREES					
3	AO	ACER RUBRUM 'OCTOBER GLORY' / OCTOBER GLORY RED MAPLE	2 1/2" CAL.	B&B	FULL CANOPY CENTRAL LEADER
33	AR	ACER RUBRUM 'RED SUNSET' / RED SUNSET MAPLE	2 1/2" CAL.	B&B	FULL CANOPY CENTRAL LEADER
1	BN	BETULA NIGRA 'DURA HEAT' / RIVER BIRCH	8'-HT.	B&B	MULTI-STEM, 3-5 CANES
4	LP	PLATANUS X ACERIFOLIA 'BLOODGOOD' / BLOODGOOD LONDON PLANETREE	2 1/2" CAL.	B&B	FULL CANOPY CENTRAL LEADER
2	LT	LIRIODENDRON TULIPIFERA / TULIP TREE	2 1/2" CAL.	B&B	FULL CANOPY CENTRAL LEADER
2	NS	NYSSA SYLVATICA / BLACK TUPELO	2 1/2" CAL.	B&B	FULL CANOPY CENTRAL LEADER
1	QA	QUERCUS ALBA / WHITE OAK	2 1/2" CAL.	B&B	FULL CANOPY CENTRAL LEADER
10	QP	QUERCUS PALUSTRIS / PIN OAK	2 1/2" CAL.	B&B	FULL CANOPY CENTRAL LEADER
15	QR	QUERCUS RUBRA / NORTHERN RED OAK	2 1/2" CAL.	B&B	FULL CANOPY CENTRAL LEADER
9	QS	QUERCUS COCCINEA / SCARLET OAK	2 1/2" CAL.	B&B	FULL CANOPY CENTRAL LEADER
UNDERSTORY TREES					
2	AC	AMELANCHIER CANADENSIS / SHADBLOW SERVICEBERRY	8'-HT.	B&B	MULTI-STEM, 3-5 CANES
3	CC	CERCIS CANADENSIS / EASTERN REDBUD	8'-HT.	B&B	MULTI-STEM, 3-5 CANES
6	CV	CRATAEGUS VIRIDIS 'WINTER KING' / WINTER KING HAWTHORN	8'-HT.	B&B	FULL CANOPY CENTRAL LEADER
EVERGREEN TREES					
17	IO	ILEX OPACA / AMERICAN HOLLY	6'-HT.	B&B	CENTRAL LEADER, FULL
31	PA	PICEA ABIES / NORWAY SPRUCE	6'-HT.	B&B	CENTRAL LEADER, FULL
SHRUBS					
26	CA	CLETHRA ALNIFOLIA / SUMMERSWEET CLETHRA	#5	CONT.	30" HT., FULL
7	IG	ILEX GLABRA / INKBERRY HOLLY	#5	CONT.	30" SPD., FULL
31	IR	ILEX VERTICILLATA / WINTERBERRY	#5	CONT.	24" SPD., FULL, FEMALE
3	IS	ILEX VERTICILLATA 'SOUTHERN GENTLEMAN' / SOUTHERN GENTLEMAN WINTERBERRY	#5	CONT.	24" SPD., FULL, MALE
13	VD	VIBURNUM DENTATUM 'SYNNESTVEDT' / CHICAGO LUSTRE ARROWWOOD VIBURNUM	#5	CONT.	30" HT., FULL
HERBACEOUS					
240	ACA	ACORUS CALAMUS / SWEETFLAG	-	PLUG	12" O.C.
770	IVE	IRIS VERSICOLOR / BLUEFLAG IRIS	-	PLUG	15" O.C.
835	JEF	JUNCUS EFFUSUS / SOFT RUSH	-	PLUG	15" O.C.
370	LCA	LOBELIA CARDINALIS / CARDINAL FLOWER	-	PLUG	15" O.C.
705	NLU	NUPHAR LUTEUM / YELLOW WATER LILY	-	PLUG	15" O.C.
840	PAN	PANICUM VIRGATUM 'SHENANDOAH' / SHENANDOAH SWITCHGRASS	#1	CONT.	24" O.C.
765	PVI	PELTANDRA VIRGINICA / ARROW ARUM	-	PLUG	15" O.C.
395	PCO	PONTEDERIA CORDATA / PICKEREL WEED	-	PLUG	15" O.C.
440	SLA	SAGGITARIA LATIFOLIA / DUCK POTATO	-	PLUG	15" O.C.

STANDARD SHA UPLAND MEADOW MIX	STANDARD SHA LOWLAND MEADOW MIX
FORBS	
BLACKEYED SUSAN	COMMON BONESET
EASTERN PURPLE CONEFLOWER	MAXIMILIAN SUNFLOWER
GRAY GOLDENROD	NEW ENGLAND ASTER
LANCELEAF TICKSEED	NEW YORK IRONWEED
PARTRIDGE PEA	SHOWY TICKSEED
SUNDIAL LUPINE	STIFF GOLDENROD
TALUS SLOPE PENSTEMON	SWAMP VERBENA
WILD BERGAMOT	TRUMPETWEED
GRASSES, SEDGES, AND RUSHES	
BROOMSEDGE	BIG BLUESTEM
DEERTONGUE	GAMAGRASS
LITTLE BLUESTEM	INDIANGRASS
PURPLETOP	SWITCHGRASS
HARD FESCUE	HARD FESCUE
	KENTUCKY BLUEGRASS

MEADOW SEED MIX NOTES:

- FORBS SEED VARIETIES LISTED ABOVE ARE THE EIGHT (8) VARIETIES SELECTED FOR THE SEED MIXES FOR THIS PROJECT. FOLLOW SHA SPECS FOR OTHER SEED VARIETIES AND SPECIAL PURPOSE MIX.
- SEE SHA STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS FOR CONSTRUCTION MATERIALS AND METHODS FOR MEADOW INSTALLATION.

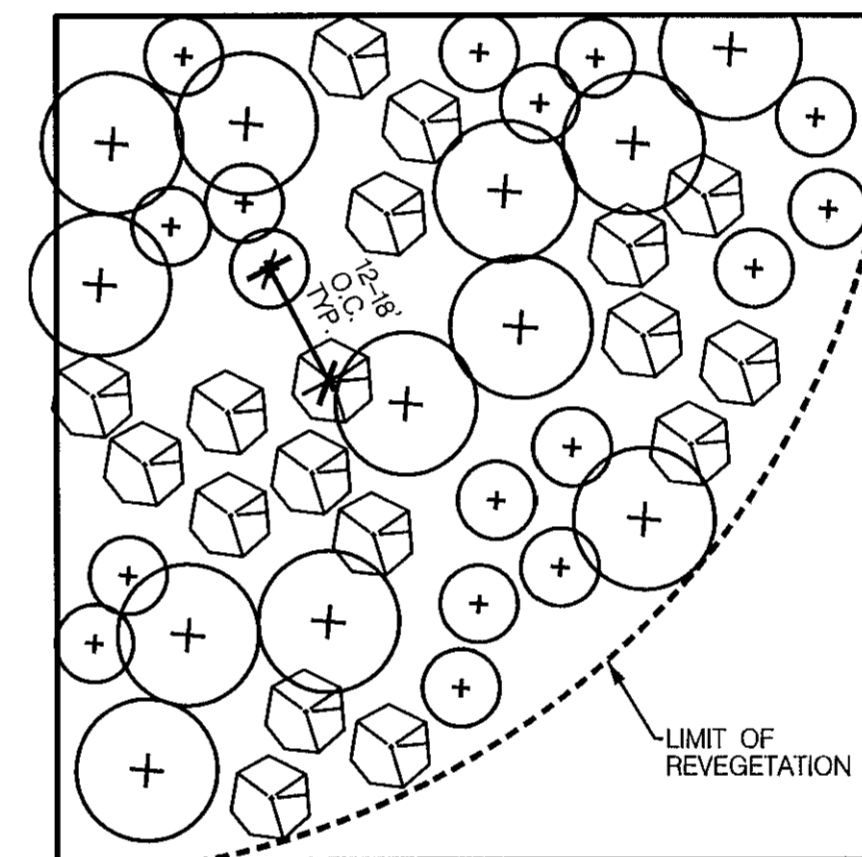
GENERAL NOTES:

- ALL DECIDUOUS TREES TO RECEIVE TREE SHELTERS. SEE SHA SPECIFICATIONS AND STANDARD PROVISIONS FOR MATERIALS AND INSTALLATION.
- DRAWINGS ARE FOR LANDSCAPE PURPOSES ONLY. AS-BUILT ROADWAY CONDITIONS MAY VARY. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND UTILITY LOCATIONS SHOWN AND DESCRIBED ON THE DRAWINGS AND SHALL INFORM THE ENGINEER /HOWARD COUNTY LANDSCAPE OPERATIONS DIVISION OF ANY DISCREPANCIES OR POTENTIAL PROBLEMS PRIOR TO COMMENCING WORK.
- ALL SHRUBS SHALL BE SET BACK A MINIMUM OF 10'-0" FROM THE EDGE OF PAVEMENT IN OPEN, UNPROTECTED AREAS. ALL TREES SHALL BE SET BACK A MINIMUM OF 30'-0" FROM THE EDGE OF TRAVEL LANE IN OPEN, UNPROTECTED AREAS.
- ALL PLANT MATERIALS SHALL BE SET BACK A MINIMUM OF 7'-0" OFF THE BACK OF W-BEAM TRAFFIC BARRIERS, CURB FACES, CONCRETE BARRIERS AND RETAINING WALLS. SHRUBS AND TREES SHALL BE SET BACK A MINIMUM OF 10'-0" AND 20'-0" RESPECTIVELY FROM BRIDGE ABUTMENTS.
- DO NOT PLANT TREES OR SHRUBS WITHIN 7'-0" OF THE CENTERLINE OF SWALES OR DITCHES.
- PLANTING IN STORMWATER MANAGEMENT AREAS SHALL BE IN ACCORDANCE WITH THE FOLLOWING GUIDELINES:
A. DO NOT PLANT WITHIN 25' OF PERFORATED PIPE AND PRINCIPAL SPILLWAY STRUCTURES, 15' FROM TOE OF SLOPE OR DAM, OR ON FILL EMBANKMENTS.
- DISTURBED AREAS NOT DESIGNATED WITH A SPECIFIC SEED MIX SHALL RECEIVE STANDARD TURF SEED MIX.
- DO NOT PLANT TREES OR SHRUBS WITHIN 5'-0" OF THE CENTERLINE OF ALL UNDERGROUND UTILITY LINES. DO NOT PLANT TREES WITHIN 20'-0" OF THE CENTERLINE OF OVERHEAD UTILITY LINES. "MISS UTILITY" (1-800-257-7777) MUST BE CONTACTED A MINIMUM OF 72 HOURS PRIOR TO PROCEEDING WITH ANY EXCAVATION FOR PLANT MATERIAL INSTALLATION.
- ALL DECIDUOUS TREES GREATER THAN OR EQUAL TO 6'-0" IN HEIGHT AND ALL EVERGREEN TREES GREATER THAN OR EQUAL TO 5'-0" IN HEIGHT SHALL BE STAKED PER SPECIFICATIONS SECTION 710.03.12.
- NO PLANT MATERIAL SHALL BE PLANTED DIRECTLY IN FRONT OF ROADWAY SIGN SIGHT LINES.

REVEGETATION PLANT SCHEDULE	BOTANICAL NAME / COMMON NAME	MAX. SPACING	SIZE	AREA	AREA	AREA	AREA
				A	B	C	D
				0.36 AC 15,783 SF	0.73 AC 31,934 SF	0.07 AC 3,197 SF	0.42 AC 18,571 SF
SHADE TREES							
	ACER RUBRUM / RED MAPLE	15' O.C.	1" CAL. #20	9	18	2	10
	LIQUIDAMBAR STYRACIFLUA / SWEETGUM	15' O.C.	1" CAL. #20	8	18	1	10
	LIRIODENDRON TULIPIFERA / TULIP TREE	15' O.C.	1" CAL. #20	9	17	2	10
	QUERCUS PALUSTRIS / PIN OAK	15' O.C.	1" CAL. #20	8	17	1	10
FLOWERING / ORNAMENTAL TREES							
	AMELANCHIER LAEVIS / ALLEGHENY SERVICEBERRY	15' O.C.	5' HT. #10	9	18	2	10
	CERCIS CANADENSIS / EASTERN REDBUD	15' O.C.	1" CAL. #15	9	18	2	11
	CHIONANTHUS VIRGINICUS / WHITE FRINGETREE	15' O.C.	3' HT. #15	9	18	2	10
EVERGREEN TREES							
	PINUS STROBUS / EASTERN WHITE PINE	15' O.C.	3' HT. #7	9	18	2	11
	PINUS VIRGINIANA / VIRGINIA PINE	15' O.C.	3' HT. #7	9	18	2	11

REVEGETATION NOTES:

- RANDOMLY PLACE REVEGETATION AREA PLANT MATERIAL IN GROUPS OF 3-5 OF THE SAME SPECIES.
- DETAIL SHOWS AN EXAMPLE OF A PLANTING LAYOUT AND IS INTENDED ONLY AS A GUIDE FOR PLANT MATERIAL ARRANGEMENT. THE CONCEPT IS TO ACHIEVE THE APPEARANCE OF RANDOM PLANT LOCATIONS. SEE PLANT LIST FOR ACTUAL PLANT SPECIES AND QUANTITIES TO BE USED.
- SELECTED PLANT MATERIAL SHALL BE SPACED RANDOMLY BETWEEN 12'-18" O.C. QUANTITIES GIVEN ARE BASED ON 15' O.C. AVERAGE SPACING
- THESE NOTES ARE FOR REVEGETATION PURPOSES ONLY. AS-BUILT CONDITIONS MAY VARY. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND NOTIFY THE ENGINEER OF DISCREPANCIES OR POTENTIAL PROBLEMS PRIOR TO COMMENCING WORK.
- ALL REVEGETATION PLANTS TO RECEIVE TREE SHELTERS.



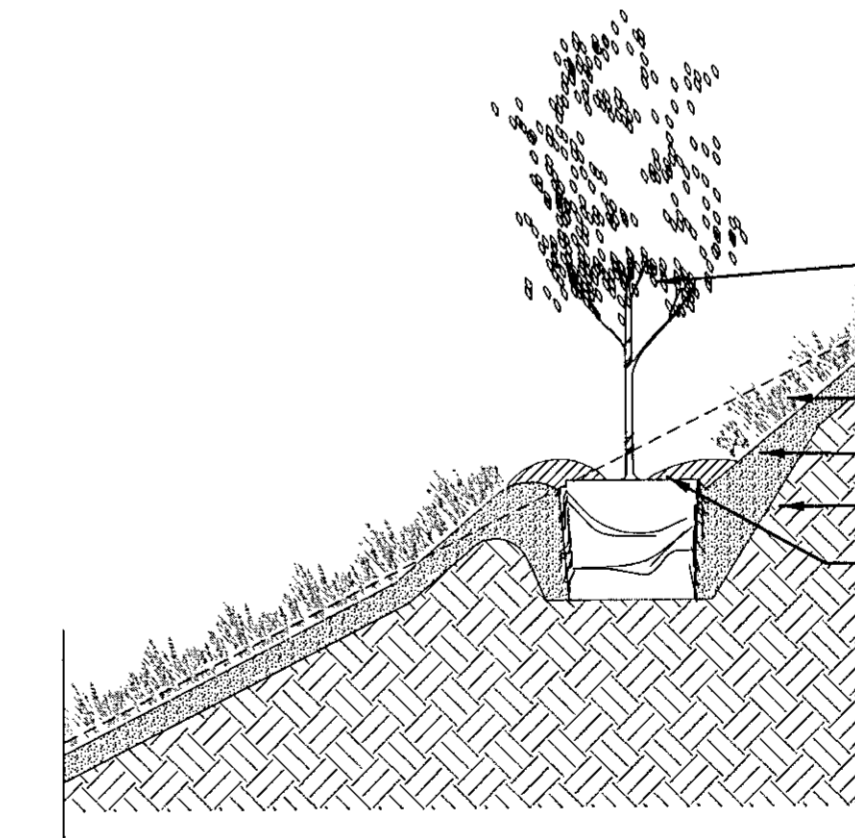
LEGEND

○ SHADE TREE

□ EVERGREEN TREE

⊕ FLOWERING TREE

REVEGETATION PLANTING N.T.S.



TREE AND SHRUB PLANTINGS. REFER TO PLAN SHEETS FOR SPECIES AND TYPICAL SPACING

SEED MIX, SEE PLANS

FURNISHED TOPSOIL

EXISTING SOIL

MULCH, 2" MIN. DEPTH

NOTE:
DO NOT PLACE MULCH AGAINST TRUNK

REVEGETATION PLANTING ON SLOPE N.T.S.

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 778, EXPIRATION DATE: 12/20/2015."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

Robert A. ... 7/16/14
DIRECTOR OF PUBLIC WORKS DATE

Manuel ... 7/16/14
CHIEF, BUREAU OF ENGINEERING DATE

Holger ... 7/16/14
CHIEF, BUREAU OF HIGHWAYS DATE

Steve ... 7/16/14
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

WR&A

MAHAN RYKIEL
ARCHITECTS, INC.
The Scott Street Building, 102 West Park Drive,
Suite 100, Baltimore, MD 21211 410.235.6001

DES: CB, NS

DRN: CO

CHK: CB

DATE: 7/11/2014

REVISION	DATE	TAX MAP	BLOCK NO.	ELECTION DISTRICT
		36	5	3 / 7

LANDSCAPE DETAILS

**BLANDAIR REGIONAL PARK
PHASE J - SOUTH**

CAPITAL PROJECT # J-4237

HOWARD COUNTY, MARYLAND

DWG. LD-07

SCALE 1" = 50'

SHEET 109 OF 138

SHA SHEET 63 OF 76



GENERAL NOTES

CRITERIA

THE CONTRACTOR SHALL BE GOVERNED BY THE STANDARDS AND REQUIREMENTS OF THE FOLLOWING PUBLICATIONS, EXCEPT AS MODIFIED BY THE SPECIAL PROVISIONS OF THIS CONTRACT.

DESIGN

MSHA - "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", 2006 EDITION AND SUBSEQUENT REVISIONS. (MD M.U.T.C.D.)

A A S H T O - "HIGHWAY SAFETY DESIGN AND OPERATIONS GUIDE" -1997

A A S H T O - "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS LUMINAIRES AND TRAFFIC SIGNALS", 2001 EDITION (CATEGORY II FOR ALL OVERHEAD AND CANTILEVER SIGN STRUCTURES).

MATERIALS AND CONSTRUCTION

MARYLAND STATE HIGHWAY ADMINISTRATION - "STANDARD SPECIFICATIONS FOR CONSTRUCTION & MATERIALS", 2008 EDITION AND SUBSEQUENT SUPPLEMENTS.

DESIGN WIND

- 100 MPH - WOOD SUPPORTS
 - 10 YEAR RECURRENCE INTERVAL
 - 100 MPH - GROUND MOUNT SIGN STEEL SUPPORTS
 - 10 YEAR RECURRENCE INTERVAL
 - 100 MPH - OVERHEAD AND CANTILEVER STRUCTURES
 - 50 YEAR RECURRENCE INTERVAL
- } ALL DISTRICTS

DESIGN STRESS

SOIL BEARING PRESSURE - S = 3,000 P.S.F. (ASSUMED)
SEE MATERIAL & CONSTRUCTION ABOVE AND SPECIAL PROVISIONS FOR DESIGN STRESSES FOR STRUCTURAL STEEL, ALUMINUM, REINFORCING STEEL AND CONCRETE.

CHAMFER

ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 3/4" X 3/4" CHAMFER.

CLASSIFICATION OF SIGNS

SIGNS ARE DIVIDED INTO TWO (2) GENERAL CATEGORIES.

1 GUIDE SIGNS

A) STRUCTURAL TYPES

- OH - OVERHEAD
- C - CANTILEVER
- GM - GROUND MOUNT, BREAKAWAY OR NON-BREAKAWAY
- BM - BRIDGE MOUNTED

B) PANELS

- MATERIAL - EXTRUDED ALUMINUM COPY - DIRECT APPLIED
- 1) HIGH INTENSITY (NEW SIGNS AND REVISIONS TO EXISTING SIGNS)

2 STANDARD SIGNS (REGULATORY, WARNING, ETC.)

A) STRUCTURAL TYPES

- WOOD SUPPORTS
- SQUARE TUBE

B) PANELS

- MATERIAL - SHEET ALUMINUM COPY - DIRECT APPLIED

IDENTIFICATION OF SIGNS AND PANELS

GUIDE SIGNS

EACH GUIDE SIGN IS IDENTIFIED BY A SIGN NUMBER ON THE PLANS AND IN THE TABULATIONS. (GM-1, GM-2, GM-3, etc)
SIGNS ON STRUCTURES ARE IDENTIFIED WITH A NUMBER AND WHERE VARIATIONS OCCUR, A LOWER CASE LETTER. (OH-1a, OH-1b, OH-1c)

STANDARD SIGNS

STANDARD SIGNS ARE IDENTIFIED BY PANEL NUMBERS AND ARE CLASSIFIED AS FOLLOWS

- R - REGULATORY
- W - WARNING
- M - ROUTE MARKERS AND ACCESSORIES
- D - DESTINATION AND MILEAGE PANELS
- S - SCHOOL

PANELS SHALL BE DESIGNATED TO AGREE WITH MARYLAND STANDARD SIGN BOOK. EACH STANDARD SIGN IS IDENTIFIED FIRST BY THE SHEET NUMBER, THEN BY THE NUMERICAL ORDER OF THE SIGN AS IT APPEARS ON THE PLAN.

FOR EXAMPLE SHEET SN 2.1-101,102,103, ETC. SHEET SN 2.2-201,202,203, ETC.

PANEL LAYOUT AND ALPHABETS

1. GUIDE SIGN PANEL LAYOUTS ARE BASED ON THE A.A.S.H.T.O. MANUALS NOTED ABOVE.
2. STANDARD SIGN PANEL LAYOUTS ARE BASED ON THE M.M.U.T.C.D. WITH SPECIFICATIONS DETAILED IN THE MARYLAND STATE HIGHWAY ADMINISTRATION PUBLICATION, "STANDARD SIGN BOOK", AVAILABLE ONLINE @ <https://www.marylandroads.com/businesswithsha/bizStdsSpecs/desManualStdPub/publicationsonline/oots/internet.signbook.asp>

REFLECTORIZATION

BACKGROUNDS, BORDERS, TEXTS AND ALL OTHER ELEMENTS OF SIGN PANELS SHALL BE REFLECTORIZED EXCEPT WHERE NOTED. REFER TO PROJECT REQUIREMENTS FOR MORE DETAIL.

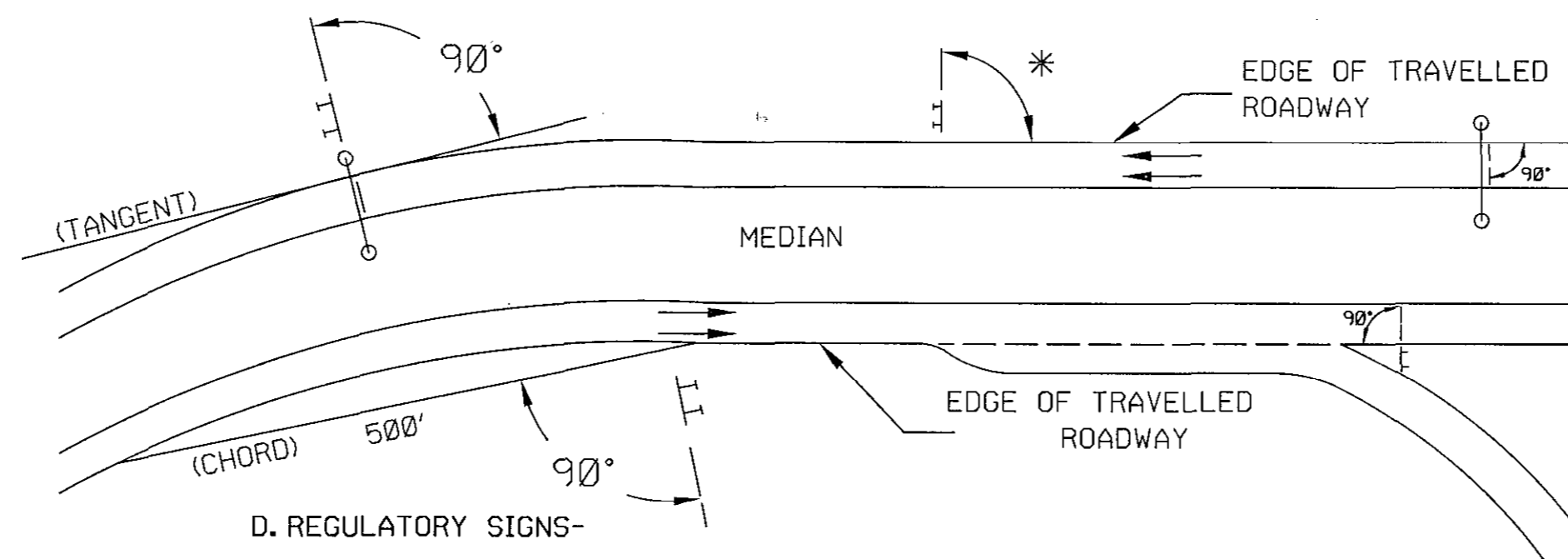
SIGN LOCATIONS

1. GUIDE SIGNS ARE LOCATED ON THE PLANS BY DIMENSION TO SURVEY STATIONS, OR WHEN NECESSARY, TO IDENTIFIABLE PHYSICAL FEATURES.
2. ALL CHANGES IN THE LOCATIONS OF SIGNS AS SHOWN ON THE PLAN SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

EXISTING UTILITIES

THE ENGINEER DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF UTILITY INFORMATION SHOWN ON THE PLAN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND PROTECT ALL EXISTING FACILITIES WHICH MIGHT BE AFFECTED BY THIS WORK OR HIS OPERATION.

ORIENTATION OF SIGN FACES



D. REGULATORY SIGNS-

- * UNDER 30 FEET FROM TRAVELLED ROADWAY TO NEAR EDGE OF SIGN - 93° AWAY FROM THE ROAD TO AVOID SPECULAR REFLECTION AS INDICATED IN 813.03 OF THE MARYLAND STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS.
- OVER 30 FEET FROM TRAVELLED ROADWAY TO NEAR EDGE OF SIGN - 90°

ROADSIDE SIGNS

1. VERTICAL ALIGNMENT
POSITION PANEL SO FACE IS PLUMB.
2. HORIZONTAL ALIGNMENT (SEE DIAGRAM ABOVE)
 - A). ON STRAIGHT ROADWAY SECTIONS, ANGLE OF SIGN FACE TO ROADWAY VARIES WITH DISTANCE FROM TRAVELLED ROADWAY TO NEAR EDGE OF SIGN - SEE DIAGRAM.
 - B). ON THE INSIDE OF HORIZONTAL CURVES, POSITION SIGN SO FACE OF PANEL MAKES AN ANGLE OF 90° WITH A CHORD BETWEEN A POINT ON NEAR EDGE OF PAVEMENT AT SIGN LOCATION AND A POINT ON EDGE OF PAVEMENT 500' IN ADVANCE OF SIGN.
 - C). ON THE OUTSIDE OF HORIZONTAL CURVES, POSITION SIGN SO FACE OF PANEL IS AT RIGHT ANGLES TO THE TANGENT OF THE CURVE AT THE SIGN LOCATION.
 - D). POSITIONING OF SIGNS AT GORES AND RAMP SEPARATIONS IS REFERRED TO THE NORMAL EDGE OF THE MAINLINE ROADWAY.

OVERHEAD SIGNS

1. VERTICAL ALIGNMENT
POSITION PANELS FOR ALL OVERHEAD STRUCTURES SO THAT PANEL FACE IS PLUMB.
2. OVERHEAD SIGN STRUCTURES SHALL NOT BE ERECTED WITHOUT ATTACHING LUMINAIRES SUPPORTS AND/OR SIGN.
3. HORIZONTAL ALIGNMENT
 - A). POSITION ALL OVERHEAD SIGNS SO THAT THE FACE OF THE PANEL IS AT RIGHT ANGLES TO THE NORMAL EDGE OF ROADWAY, IF ON A STRAIGHT ROADWAY SECTION.
 - B). POSITION ALL OVERHEAD SIGNS SO THAT THE FACE OF THE PANEL IS AT RIGHT ANGLES TO THE TANGENT OF THE CURVE AT SIGN LOCATION, IF ON A HORIZONTAL CURVE.
 - C). POSITIONING OF SIGNS AT GORES AND RAMP SEPARATIONS IS REFERRED TO THE NORMAL EDGE OF THE MAINLINE ROADWAY.
4. VERTICAL CLEARANCE
 - A). OVERHEAD SIGNS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 17'-9" FROM ROADWAY TO THE BOTTOM OF LIGHT FIXTURES. ALL LIGHT FIXTURES ARE TO BE AT THE SAME ELEVATION.
 - B). IF THE CONTRACTOR CANNOT OBTAIN 17'-9" (SEE 3A) CLEARANCE, HE IS TO CEASE WORK AND CONTACT THE PROJECT ENGINEER FOR FURTHER INSTRUCTIONS. THE PROJECT ENGINEER MAY CONTACT THE TRAFFIC ENGINEERING DESIGN DIVISION FOR ASSISTANCE.
 - C). ON ALL OVERHEAD SIGNS, THE MINIMUM CLEARANCE TO BOTTOM OF SIGN: 20'-9".

PROJECT REQUIREMENTS

ALL NEW SIGNS ON THIS PROJECT SHALL BE FABRICATED FROM SHEETING WHICH MEETS ALL OF THE FOLLOWING REQUIREMENTS, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, OR AS DIRECTED BY THE ENGINEER:

1. SHEETING SHALL MEET THE REQUIREMENTS OF SECTIONS 813 AND 950.03 OF MSHA'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS (JULY 2008) AND SUBSEQUENT REVISIONS
2. LISTED ON MSHA OFFICE OF TRAFFIC AND SAFETY'S QUALIFIED PRODUCTS LIST (QPL)
3. THE FOLLOWING TYPES OF SHEETING SHALL BE USED ON THE FOLLOWING SIGN CLASSIFICATIONS
 - A. GUIDE, EXIT GORE, AND GENERAL INFORMATION SIGNS- RETROREFLECTIVE SHEETING FOR GUIDE SIGNS, EXIT GORE, AND GENERAL INFORMATION (INCLUDES WHITE ON GREEN, WHITE ON BLUE, WHITE ON BROWN, AND THE REVERSE OF THESE COLORS) SHALL MEET OR EXCEED THE REQUIREMENTS FOR TYPE IX LEGEND ON TYPE IX BACKGROUND. REGULATORY AND WARNING MESSAGES WITHIN GUIDE SIGNS SHALL BE NON-REFLECTIVE BLACK LEGEND ON BACKGROUND SHEETING WHICH MEETS OR EXCEEDS THE REQUIREMENTS FOR TYPE IX SHEETING.
 - B. WARNING SIGNS- RETROREFLECTIVE SHEETING FOR WARNING SIGNS (INCLUDES BLACK ON YELLOW AND BLACK ON FLUORESCENT YELLOW) SHALL BE NON-REFLECTIVE BLACK LEGEND ON BACKGROUND SHEETING WHICH MEETS OR EXCEEDS THE REQUIREMENTS FOR TYPE IX SHEETING. REGULATORY MESSAGES WITHIN WARNING SIGNS SHALL FOLLOW THE GUIDELINES FOR REGULATORY SIGNS
 - C. SCHOOL SIGNS- RETROREFLECTIVE SHEETING FOR SCHOOL SIGNS (INCLUDES BLACK ON YELLOW, BLACK ON FLUORESCENT YELLOW AND BLACK ON FLUORESCENT YELLOW GREEN) SHALL BE NON-REFLECTIVE BLACK LEGEND ON BACKGROUND SHEETING WHICH MEETS OR EXCEEDS THE REQUIREMENTS FOR TYPE IX SHEETING. REGULATORY MESSAGES WITHIN SCHOOL SIGNS SHALL FOLLOW THE REQUIREMENTS FOR REGULATORY SIGNS.
 - D. REGULATORY SIGNS- FALL INTO THREE SUBCATEGORIES:
 1. "RED" REGULATORY SIGNS (STOP, YIELD, DO NOT ENTER AND WRONG WAY) RETROREFLECTIVE SHEETING FOR THESE SIGNS AND THEIR SUPPLEMENTAL PANELS (INCLUDES WHITE ON RED AND RED ON WHITE) SHALL MEET OR EXCEED THE REQUIREMENTS FOR TYPE IX SHEETING.

PROJECT REQUIREMENTS (CONTINUED)

D. REGULATORY SIGNS (CONT'D)

11. ALL R7 AND R8 SERIES PARKING RELATED SIGNS AND THEIR SUPPLEMENTAL PANELS, NO TRESPASSING SIGNS, AND SIGNS DIRECTED AT PEDESTRIANS AND BICYCLISTS ONLY (INCLUDES RED ON WHITE, GREEN ON WHITE, BLUE ON WHITE, BLACK ON WHITE AND THE REVERSE OF THESE COLORS) SHALL BE TYPE I LEGEND ON TYPE I BACKGROUND.
- 11.1. ALL OTHER REGULATORY SIGNS- RETROREFLECTIVE SHEETING FOR THESE SIGNS AND THEIR SUPPLEMENTAL PANELS (INCLUDES BLACK ON WHITE) SHALL BE NON-REFLECTIVE BLACK LEGEND ON TYPE IV BACKGROUND. WHERE RED IS SPECIFIED, OR WHERE THE COLOR OF THE SIGN IS WHITE ON BLACK, THE LEGEND SHALL BE TYPE IV RETROREFLECTIVE SHEETING ON NON-REFLECTIVE BLACK BACKGROUND. WARNING MESSAGES WITHIN REGULATORY SIGNS SHALL FOLLOW THE GUIDELINES FOR WARNING SIGNS.

E. ROUTE MARKERS- RETROREFLECTIVE SHEETING FOR ROUTE MARKERS (INCLUDES BLACK ON WHITE, GREEN ON WHITE, WHITE ON GREEN, WHITE ON RED/BLUE) SHALL MEET THE REQUIREMENTS OF GUIDE SIGNS ABOVE WHEN SPECIFIED AS THE LEGEND OF A GUIDE SIGN. RETROREFLECTIVE SHEETING FOR ALL INDEPENDENT ROUTE MARKERS AND THEIR AUXILIARY PANELS SHALL BE TYPE IV AND/OR NON-REFLECTIVE BLACK LEGEND ON TYPE IV BACKGROUND.

F. LOGOS AND/OR GRAPHICS- WITHIN SIGNS SHALL FOLLOW THE GUIDELINES FOR THE RESPECTIVE SIGN CLASSIFICATION UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, OR AS DIRECTED BY THE ENGINEER.

G. CIVIL DEFENSE SIGNS AND OTHER SIGNS NOT SPECIFICALLY FALLING INTO ONE OF THE CATEGORIES ABOVE, SHALL FOLLOW THE GUIDELINES FOR THE SIGN CLASSIFICATION THAT MOST CLOSELY MATCHES THE COLOR(S) OF THE PROPOSED SIGN.

4. THE FOLLOWING MINIMUM THICKNESS SHALL BE USED FOR THE APPROPRIATE WIDTH OF SHEET ALUMINUM BLANKS.

LONGEST DIMENSION	MINIMUM THICKNESS
UP TO 12' -----	0.040"
GREATER THAN 12' TO 24' -----	0.063"
GREATER THAN 24' TO 36' -----	0.080"
GREATER THAN 36' TO 48' -----	0.100"
OVER 48' -----	0.125"

HOWARD COUNTY SPECIAL NOTES:

- 1) THESE NOTES ONLY APPLY TO SHEETS WITH HOWARD COUNTY BORDER AND GM-12.
- 2) ALL HOWARD COUNTY OWNED TRAFFIC CONTROL DEVICE LOCATIONS AND PAVEMENT MARKINGS SHOWN ON THE HOWARD COUNTY PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410)313-5752 PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS.
- 3) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH" TYPE), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- 4) ALL WARNING SIGNS ON THE HOWARD COUNTY PLANS SHALL BE BLACK ON YELLOW, UNLESS OTHERWISE NOTED. PEDESTRIAN SIGNS SHALL BE BLACK ON FLUORESCENT YELLOW-GREEN AS NOTED.
- 5) ALL SIGNS ON HOWARD COUNTY PLANS SHALL BE FABRICATED OF ASTM TYPE IV RETROREFLECTIVE SHEETING LEGENDS AND BACKGROUNDS, EXCEPT WHERE FLUORESCENT YELLOW-GREEN IS SPECIFIED, WHICH SHALL BE ASTM TYPE IX/XI. ALL BLACK LEGEND SHALL BE NON-REFLECTIVE BLACK.
- 6) ALL STREET NAME SIGNS SHALL BE FABRICATED BY THE HOWARD COUNTY SIGN SHOP. CONTACT HOWARD COUNTY TRAFFIC AT 410-313-5752 FOR INFO & DETAILS REGARDING INSTALLTION.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

Jan P. Williams 7/11/14
DIRECTOR OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS

Thomas P. Sullivan 7/11/14
CHIEF, BUREAU OF ENGINEERING
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION

Steve Sharan 7/11/14
DATE

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."



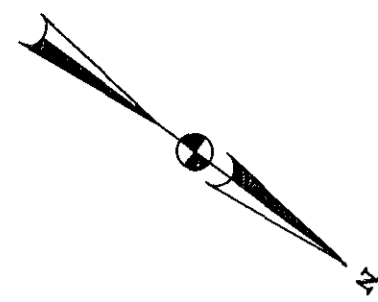
SHA

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
BLANDAIR REGIONAL PARK
PHASE J-- SOUTH

WR&A

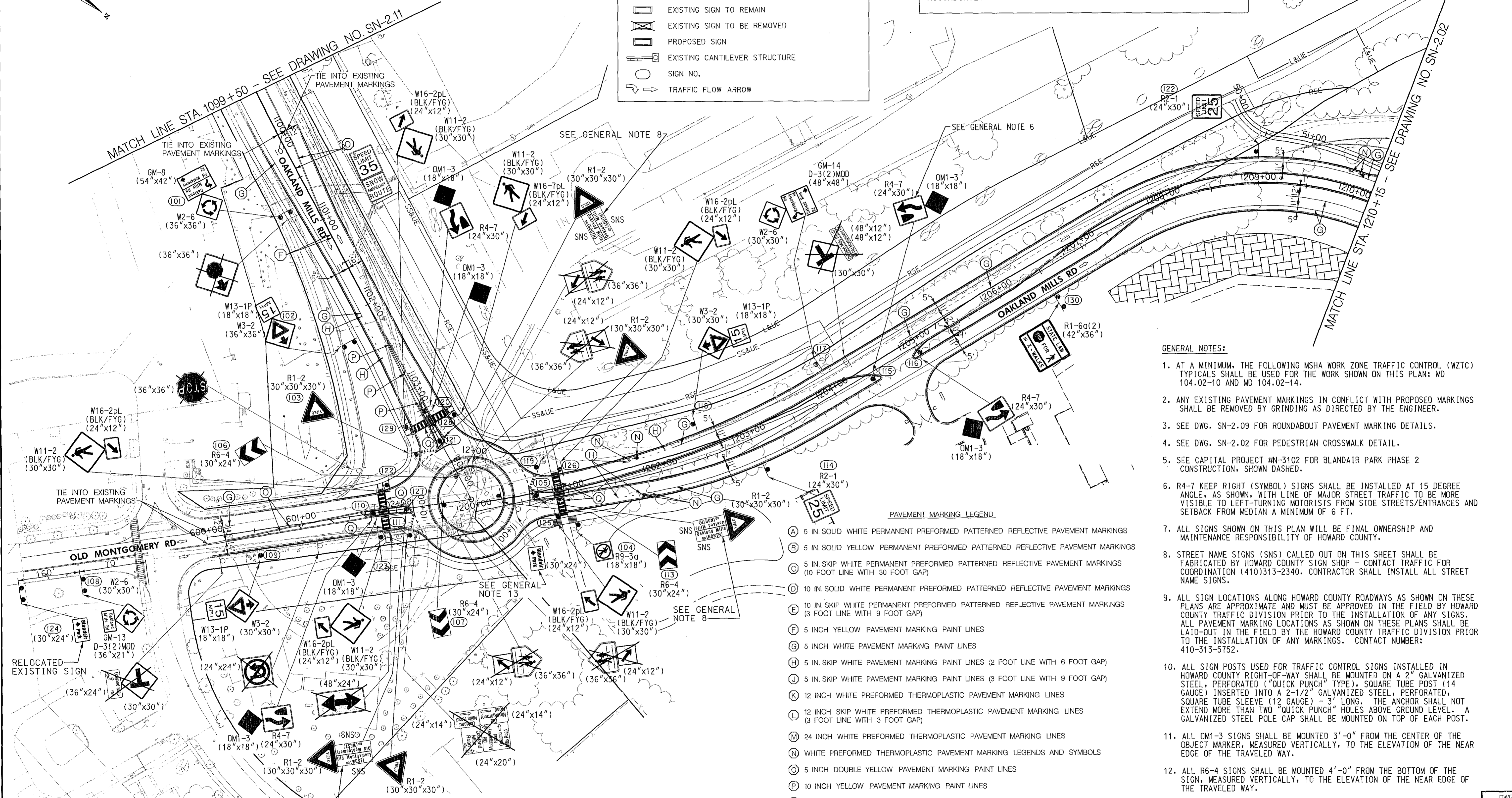
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, Maryland 21231

REVISIONS		GENERAL NOTES AND PROPOSALS	
SCALE	NONE	DATE	7/11/2014
COUNTY	HOWARD COUNTY	CONTRACT NO.	J-4237
DESIGNED BY	WRA	LOGMILE	13017505.10 - 13017505.18
DRAWN BY	WRA	TIMS NO.	
CHECKED BY	J. MOCNY	TOD NO.	
F.A.P. NO.	NA	DRAWING NO.	SN-1 OF 1
		SHEET NO.	110 OF 138



SIGN LEGEND	
	EXISTING GROUND MOUNTED SIGN AND SUPPORT(S)
	PROPOSED GROUND MOUNTED SIGN AND SUPPORT(S)
	EXISTING SIGN TO REMAIN
	EXISTING SIGN TO BE REMOVED
	PROPOSED SIGN
	EXISTING CANTILEVER STRUCTURE
	SIGN NO.
	TRAFFIC FLOW ARROW

SPECIAL NOTE:
PAVEMENT MARKING PAINT LINES REQUIRE A DOUBLE APPLICATION ON NEWLY SURFACED ROADWAY. THE QUANTITIES HAVE BEEN INCREASED ACCORDINGLY.



- GENERAL NOTES:**
- AT A MINIMUM, THE FOLLOWING MSHA WORK ZONE TRAFFIC CONTROL (WZTC) TYPICALS SHALL BE USED FOR THE WORK SHOWN ON THIS PLAN: MD 104.02-10 AND MD 104.02-14.
 - ANY EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED MARKINGS SHALL BE REMOVED BY GRINDING AS DIRECTED BY THE ENGINEER.
 - SEE DWG. SN-2.09 FOR ROUNDABOUT PAVEMENT MARKING DETAILS.
 - SEE DWG. SN-2.02 FOR PEDESTRIAN CROSSWALK DETAIL.
 - SEE CAPITAL PROJECT #N-3102 FOR BLANDAIR PARK PHASE 2 CONSTRUCTION, SHOWN DASHED.
 - R4-7 KEEP RIGHT (SYMBOL) SIGNS SHALL BE INSTALLED AT 15 DEGREE ANGLE, AS SHOWN, WITH LINE OF MAJOR STREET TRAFFIC TO BE MORE VISIBLE TO LEFT-TURNING MOTORISTS FROM SIDE STREETS/ENTRANCES AND SETBACK FROM MEDIAN A MINIMUM OF 6 FT.
 - ALL SIGNS SHOWN ON THIS PLAN WILL BE FINAL OWNERSHIP AND MAINTENANCE RESPONSIBILITY OF HOWARD COUNTY.
 - STREET NAME SIGNS (SNS) CALLED OUT ON THIS SHEET SHALL BE FABRICATED BY HOWARD COUNTY SIGN SHOP - CONTACT TRAFFIC FOR COORDINATION (410)313-2340. CONTRACTOR SHALL INSTALL ALL STREET NAME SIGNS.
 - ALL SIGN LOCATIONS ALONG HOWARD COUNTY ROADWAYS AS SHOWN ON THESE PLANS ARE APPROXIMATE AND MUST BE APPROVED IN THE FIELD BY HOWARD COUNTY TRAFFIC DIVISION PRIOR TO THE INSTALLATION OF ANY SIGNS. ALL PAVEMENT MARKING LOCATIONS AS SHOWN ON THESE PLANS SHALL BE LAID-OUT IN THE FIELD BY THE HOWARD COUNTY TRAFFIC DIVISION PRIOR TO THE INSTALLATION OF ANY MARKINGS. CONTACT NUMBER: 410-313-5752.
 - ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN HOWARD COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH" TYPE), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
 - ALL DM1-3 SIGNS SHALL BE MOUNTED 3'-0" FROM THE CENTER OF THE OBJECT MARKER, MEASURED VERTICALLY, TO THE ELEVATION OF THE NEAR EDGE OF THE TRAVELED WAY.
 - ALL R6-4 SIGNS SHALL BE MOUNTED 4'-0" FROM THE BOTTOM OF THE SIGN, MEASURED VERTICALLY, TO THE ELEVATION OF THE NEAR EDGE OF THE TRAVELED WAY.
 - RELOCATE EXISTING SIGN ONLY. REMOVE EXISTING SQUARE PERFORATED TUBULAR STEEL SIGN SUPPORT. RELOCATE EXISTING SIGN 160' EAST OF PROPOSED SIGN NO. 108 ON OLD MONTGOMERY ROAD.

- PAVEMENT MARKING LEGEND**
- (A) 5 IN. SOLID WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
 - (B) 5 IN. SOLID YELLOW PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
 - (C) 5 IN. SKIP WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS (10 FOOT LINE WITH 30 FOOT GAP)
 - (D) 10 IN. SOLID WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
 - (E) 10 IN. SKIP WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS (3 FOOT LINE WITH 9 FOOT GAP)
 - (F) 5 INCH YELLOW PAVEMENT MARKING PAINT LINES
 - (G) 5 INCH WHITE PAVEMENT MARKING PAINT LINES
 - (H) 5 IN. SKIP WHITE PAVEMENT MARKING PAINT LINES (2 FOOT LINE WITH 6 FOOT GAP)
 - (J) 5 IN. SKIP WHITE PAVEMENT MARKING PAINT LINES (3 FOOT LINE WITH 9 FOOT GAP)
 - (K) 12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
 - (L) 12 INCH SKIP WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES (3 FOOT LINE WITH 3 FOOT GAP)
 - (M) 24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
 - (N) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
 - (O) 5 INCH DOUBLE YELLOW PAVEMENT MARKING PAINT LINES
 - (P) 10 INCH YELLOW PAVEMENT MARKING PAINT LINES
 - (Q) HOWARD COUNTY STANDARD CROSSWALK - PREFORMED THERMOPLASTIC (SEE SHEET SN-2.02 FOR DETAILS)
 - (R) 10 INCH WHITE PAVEMENT MARKING PAINT LINES

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

Ray B. 7/6/14
DIRECTOR OF PUBLIC WORKS
DATE

Thomas E. Butler 7/1/14
CHIEF, BUREAU OF ENGINEERING
DATE

Steve Shaver 7/1/14
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION
DATE

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

WR&A



DES:	WRA
DRN:	WRA
CHK:	JMM
DATE:	7/1/2014
BY:	NO.
REVISION:	
DATE:	

SIGNING & MARKING PLAN

**BLANDAIR REGIONAL PARK
PHASE J - SOUTH**

CAPITAL PROJECT # J-4237

ELECTION DISTRICT 3 / 7 HOWARD COUNTY, MARYLAND

DWG. **SN-2.01**

SCALE
1" = 50'

SHEET
111 OF **138**

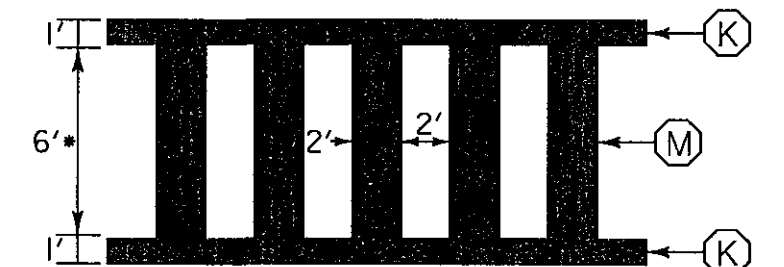
GENERAL NOTES:

- AT A MINIMUM, THE FOLLOWING MSHA WORK ZONE TRAFFIC CONTROL (WZTC) TYPICALS SHALL BE USED FOR THE WORK SHOWN ON THIS PLAN: MD 104.02-10 AND MD 104.02-14.
- ANY EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED MARKINGS SHALL BE REMOVED BY GRINDING AS DIRECTED BY THE ENGINEER.
- R4-7 KEEP RIGHT (SYMBOL) SIGNS SHALL BE INSTALLED AT 15 DEGREE ANGLE, AS SHOWN, WITH LINE OF MAJOR STREET TRAFFIC TO BE MORE VISIBLE TO LEFT-TURNING MOTORISTS FROM SIDE STREETS/ENTRANCES AND SETBACK FROM MEDIAN A MINIMUM OF 6 FT.
- ALL SIGNS SHOWN ON THIS PLAN WILL BE FINAL OWNERSHIP AND MAINTENANCE RESPONSIBILITY OF HOWARD COUNTY.
- HOWARD COUNTY "HUMP" SIGNS CALLED OUT ON THIS SHEET SHALL BE FABRICATED BY HOWARD COUNTY SIGN SHOP - CONTACT TRAFFIC FOR COORDINATION (410)313-2340. CONTRACTOR SHALL INSTALL "HUMP" SIGN.
- ALL SIGN LOCATIONS ALONG HOWARD COUNTY ROADWAYS AS SHOWN ON THESE PLANS ARE APPROXIMATE AND MUST BE APPROVED IN THE FIELD BY HOWARD COUNTY TRAFFIC DIVISION PRIOR TO THE INSTALLATION OF ANY SIGNS. ALL PAVEMENT MARKING LOCATIONS AS SHOWN ON THESE PLANS SHALL BE LAID-OUT IN THE FIELD BY THE HOWARD COUNTY TRAFFIC DIVISION PRIOR TO THE INSTALLATION OF ANY MARKINGS. CONTACT NUMBER: 410-313-5752.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN HOWARD COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH" TYPE), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- ALL OBJECT MARKERS SHALL BE MOUNTED 3'-0" FROM THE CENTER OF THE OBJECT MARKER, MEASURED VERTICALLY, TO THE ELEVATION OF THE NEAR EDGE OF THE TRAVELED WAY.
- SIGN NOS. 211 AND 214 SHALL BE MOUNTED 5'-0" FROM THE CENTER OF THE SIGN, MEASURED VERTICALLY, TO THE ELEVATION OF THE NEAR EDGE OF THE TRAVELED WAY.
- SEE TRAFFIC SIGNALIZATION PLANS (SG-01 AND SG-02) FOR PROPOSED PEDESTRIAN CROSSING RAPID RECTANGULAR FLASHING BEACONS DETAILS.
- SEE CAPITAL PROJECT #N-3102 FOR BLANDAIR PARK PHASE 2 CONSTRUCTION, SHOWN DASHED.
- CONTRACTOR SHALL REMOVE ALL EXISTING "NO PARKING SIGNS" ALONG EXISTING OAKLAND MILLS ROAD TO BE REMOVED, AS DIRECTED BY HOWARD COUNTY TRAFFIC. ALL SIGNS SHALL BE SALVAGED AND STOCKPILED FOR PICK-UP BY HOWARD COUNTY. WORK IS INCIDENTAL TO REMOVAL OF ROADWAY.

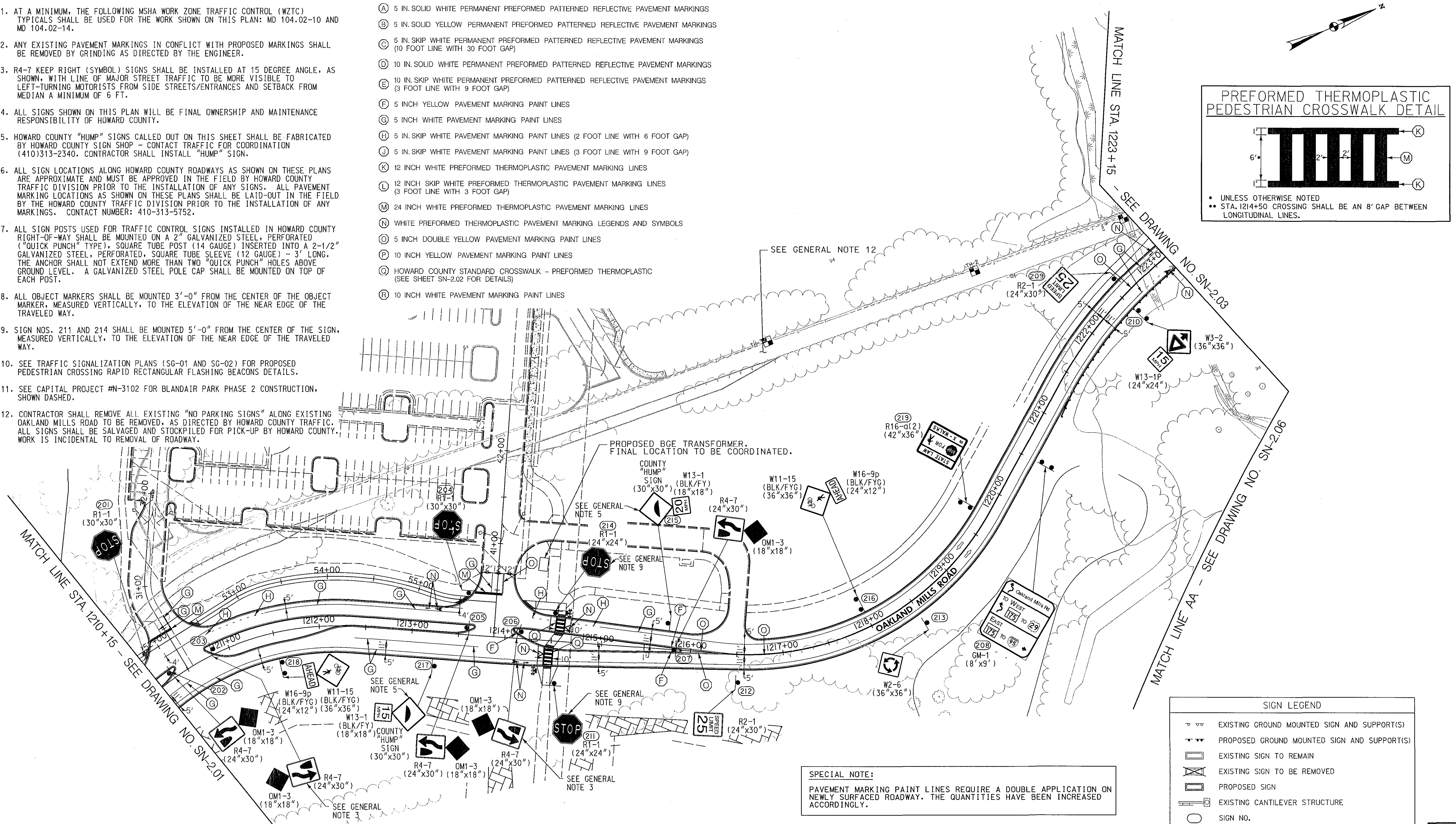
PAVEMENT MARKING LEGEND

- (A) 5 IN. SOLID WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (B) 5 IN. SOLID YELLOW PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (C) 5 IN. SKIP WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS (10 FOOT LINE WITH 30 FOOT GAP)
- (D) 10 IN. SOLID WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
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- (N) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
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- (P) 10 INCH YELLOW PAVEMENT MARKING PAINT LINES
- (Q) HOWARD COUNTY STANDARD CROSSWALK - PREFORMED THERMOPLASTIC (SEE SHEET SN-2.02 FOR DETAILS)
- (R) 10 INCH WHITE PAVEMENT MARKING PAINT LINES

PREFORMED THERMOPLASTIC PEDESTRIAN CROSSWALK DETAIL



- UNLESS OTHERWISE NOTED
- STA. 1214+50 CROSSING SHALL BE AN 8' GAP BETWEEN LONGITUDINAL LINES.



SPECIAL NOTE:
PAVEMENT MARKING PAINT LINES REQUIRE A DOUBLE APPLICATION ON NEWLY SURFACED ROADWAY. THE QUANTITIES HAVE BEEN INCREASED ACCORDINGLY.

SIGN LEGEND	
	EXISTING GROUND MOUNTED SIGN AND SUPPORT(S)
	PROPOSED GROUND MOUNTED SIGN AND SUPPORT(S)
	EXISTING SIGN TO REMAIN
	EXISTING SIGN TO BE REMOVED
	PROPOSED SIGN
	EXISTING CANTILEVER STRUCTURE
	SIGN NO.
	TRAFFIC FLOW ARROW

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

John P. ... 7/15/14
DIRECTOR OF PUBLIC WORKS DATE

Thomas E. Butler 7/15/14
CHIEF, BUREAU OF ENGINEERING DATE

Steve Shaver 7/15/14
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

WR&A



DES:	WRA				
DRN:	WRA				
CHK:	WRA				
DATE:	7/15/2014	BY:		NO.	
REVISION		DATE		TAX MAP	36
				BLOCK NO.	5

SIGNING & MARKING PLAN

**BLANDAIR REGIONAL PARK
PHASE J - SOUTH**

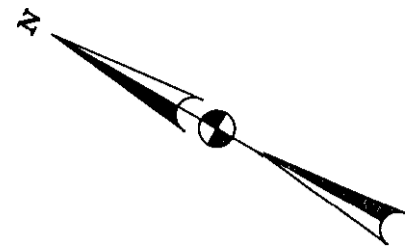
CAPITAL PROJECT # J-4237

ELECTION DISTRICT 3/7 HOWARD COUNTY, MARYLAND

DWG. SN-2.02

SCALE 1" = 50'

SHEET 112 OF 138

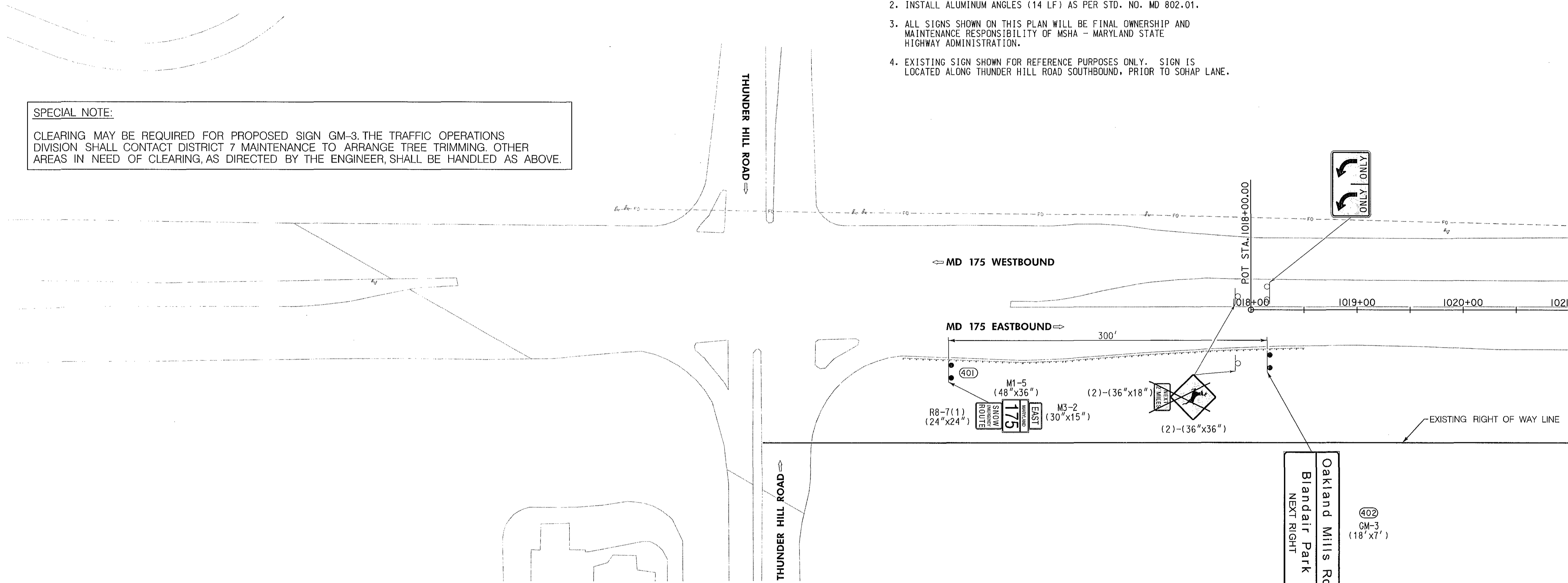


SPECIAL NOTE:

CLEARING MAY BE REQUIRED FOR PROPOSED SIGN GM-3. THE TRAFFIC OPERATIONS DIVISION SHALL CONTACT DISTRICT 7 MAINTENANCE TO ARRANGE TREE TRIMMING. OTHER AREAS IN NEED OF CLEARING, AS DIRECTED BY THE ENGINEER, SHALL BE HANDLED AS ABOVE.

GENERAL NOTES:

1. AT A MINIMUM, THE FOLLOWING MSHA WORK ZONE TRAFFIC CONTROL (WZTC) TYPICALS SHALL BE USED FOR THE WORK SHOWN ON THIS PLAN: MD-104.04-01 AND MD-104.04-05.
2. INSTALL ALUMINUM ANGLES (14 LF) AS PER STD. NO. MD 802.01.
3. ALL SIGNS SHOWN ON THIS PLAN WILL BE FINAL OWNERSHIP AND MAINTENANCE RESPONSIBILITY OF MSHA - MARYLAND STATE HIGHWAY ADMINISTRATION.
4. EXISTING SIGN SHOWN FOR REFERENCE PURPOSES ONLY. SIGN IS LOCATED ALONG THUNDER HILL ROAD SOUTHBOUND, PRIOR TO SOHAP LANE.



PAVEMENT MARKING LEGEND

- (A) 5 IN. SOLID WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (B) 5 IN. SOLID YELLOW PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
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- (Q) HOWARD COUNTY STANDARD CROSSWALK - PREFORMED THERMOPLASTIC (SEE SHEET SN-2.02 FOR DETAILS)
- (R) 10 INCH WHITE PAVEMENT MARKING PAINT LINES

SIGN LEGEND

- EXISTING GROUND MOUNTED SIGN AND SUPPORT(S)
- PROPOSED GROUND MOUNTED SIGN AND SUPPORT(S)
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN
- EXISTING CANTILEVER STRUCTURE
- SIGN NO.
- TRAFFIC FLOW ARROW

Blandair Park

SEE GENERAL NOTE 4

Oakland Mills Rd
Blandair Park
NEXT RIGHT

SEE GENERAL NOTE 2

MATCH LINE STA. 1021+00 - SEE DRAWING NO. SN-2.05



"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."



WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, Maryland 21231

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

[Signature] 7/15/14 *[Signature]* 7/15/14
DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 7/11/14 *[Signature]* 7/11/14
CHIEF, BUREAU OF HIGHWAYS DATE CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
BLANDAIR REGIONAL PARK
PHASE J - SOUTH

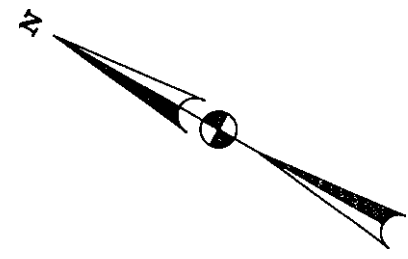
SHA APPROVALS ARE FOR SIGNING DRAWINGS SN-2.04 THRU SN-2.08

APPROVALS	REVISIONS
TEAM LEADER	
ASST. DIV. CHIEF	
DIVISION CHIEF	
OFFICE DIRECTOR	

SIGNING AND MARKING PLAN

SCALE 1" = 50'	DATE 7/12/14	CONTRACT NO. J-4237
DESIGNED BY WRA	COUNTY HOWARD COUNTY	
DRAWN BY WRA	LOGMILE 13017505.10 - 13017506.10	
CHECKED BY J.MOCNY	TIMS NO.	
F.A.P. NO. NA	TOD NO.	
DRAWING NO. SN-2.04	OF 10	SHEET NO. 114 OF 138

BY: scougherty



GENERAL NOTES:

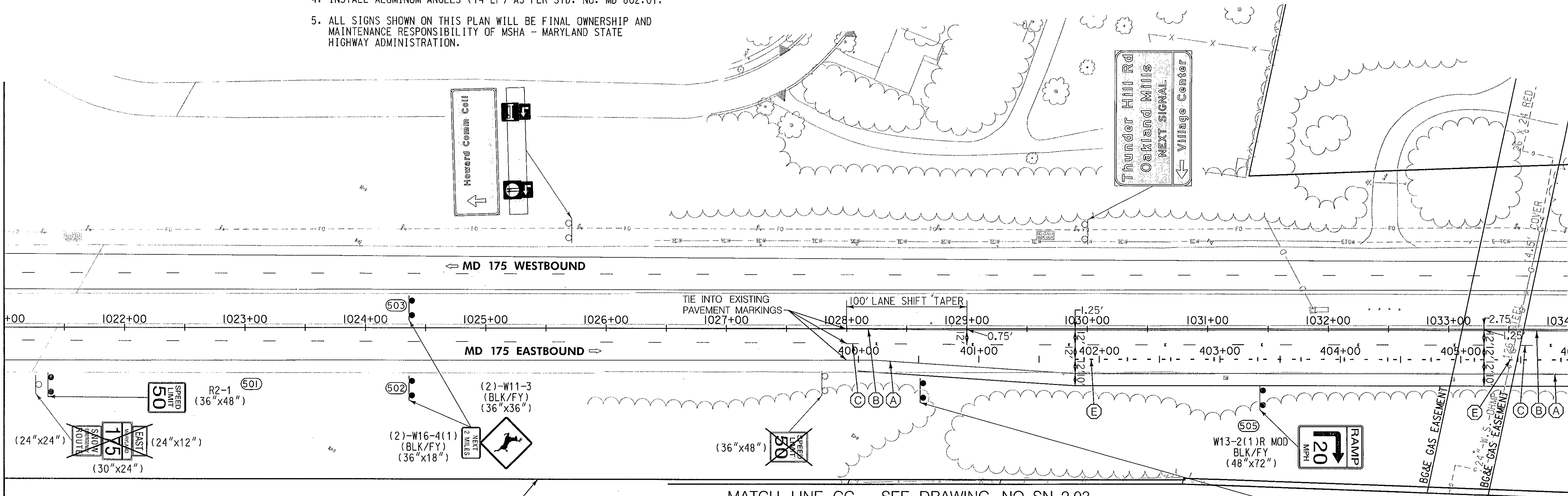
1. AT A MINIMUM, THE FOLLOWING MSHA WORK ZONE TRAFFIC CONTROL (WZTC) TYPICALS SHALL BE USED FOR THE WORK SHOWN ON THIS PLAN: MD-104.04-01, MD-104.04-03 AND MD-104.04-05.
2. INSTALL PLOWABLE RAISED PAVEMENT MARKERS AS PER THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THROUGHOUT LIMITS OF PROPOSED PAVING ON MD 175 AND RAMP WITHIN SHA RIGHT OF WAY.
3. ANY EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED MARKINGS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
4. INSTALL ALUMINUM ANGLES (14 LF) AS PER STD. NO. MD 802.01.
5. ALL SIGNS SHOWN ON THIS PLAN WILL BE FINAL OWNERSHIP AND MAINTENANCE RESPONSIBILITY OF MSHA - MARYLAND STATE HIGHWAY ADMINISTRATION.

SPECIAL NOTE:

CLEARING MAY BE REQUIRED FOR PROPOSED SIGN GM-4. THE TRAFFIC OPERATIONS DIVISION SHALL CONTACT DISTRICT 7 MAINTENANCE TO ARRANGE TREE TRIMMING. OTHER AREAS IN NEED OF CLEARING, AS DIRECTED BY THE ENGINEER, SHALL BE HANDLED AS ABOVE.

MATCH LINE STA. 1021+00 - SEE DRAWING NO. SN-2.04

MATCH LINE STA. 1034+00 - SEE DRAWING NO. SN-2.06



MATCH LINE CC - SEE DRAWING NO. SN-2.03

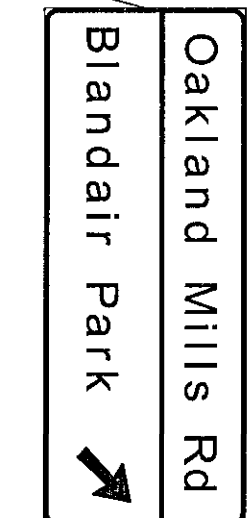
EXISTING RIGHT OF WAY LINE

PAVEMENT MARKING LEGEND

- (A) 5 IN. SOLID WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (B) 5 IN. SOLID YELLOW PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (C) 5 IN. SKIP WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS (10 FOOT LINE WITH 30 FOOT GAP)
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- (Q) HOWARD COUNTY STANDARD CROSSWALK - PREFORMED THERMOPLASTIC (SEE SHEET SN-2.02 FOR DETAILS)
- (R) 10 INCH WHITE PAVEMENT MARKING PAINT LINES

SIGN LEGEND

- ▲▲ EXISTING GROUND MOUNTED SIGN AND SUPPORT(S)
- ▲▲▲ PROPOSED GROUND MOUNTED SIGN AND SUPPORT(S)
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN
- EXISTING CANTILEVER STRUCTURE
- SIGN NO.
- TRAFFIC FLOW ARROW



SEE GENERAL NOTE 4



"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."

WR&A
WHITMAN, REQUARDT & ASSOCIATES, LLP
 801 South Caroline Street, Baltimore, Maryland 21231

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND.

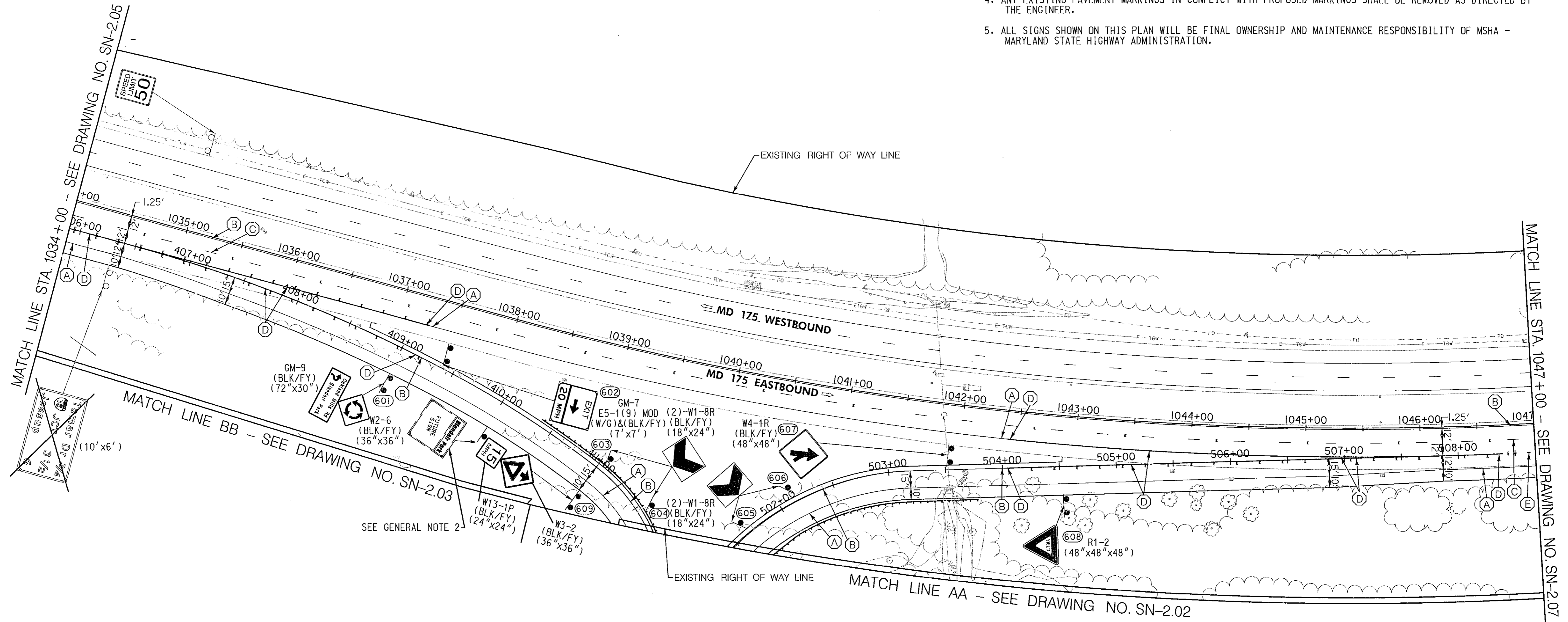
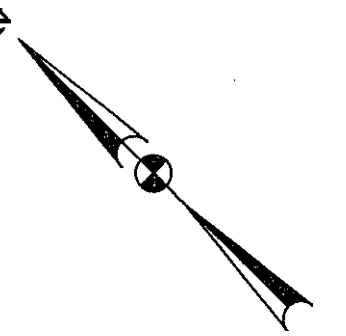
<i>[Signature]</i> 7/15/14 DIRECTOR OF PUBLIC WORKS	<i>[Signature]</i> 7/15/14 CHIEF, BUREAU OF ENGINEERING
<i>[Signature]</i> 7/11/14 CHIEF, BUREAU OF HIGHWAYS	<i>[Signature]</i> 7/11/14 CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION

SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 OFFICE OF TRAFFIC & SAFETY
 TRAFFIC ENGINEERING DESIGN DIVISION
 BLANDAIR REGIONAL PARK
 PHASE J-- SOUTH

SIGNING AND MARKING PLAN	
REVISIONS	SCALE 1" = 50' DATE 7/11/2014 CONTRACT NO. J-4237
DESIGNED BY WRA	COUNTY HOWARD COUNTY
DRAWN BY WRA	LOGMILE 13017505.10 - 13017506.18
CHECKED BY J. MOCNY	TMS NO.
F.A.P. NO. NA	TOD NO.
DRAWING NO. SN-2.05 OF 10	SHEET NO. 115 OF 138

GENERAL NOTES:

1. AT A MINIMUM, THE FOLLOWING MSHA WORK ZONE TRAFFIC CONTROL (WZTC) TYPICAL SHALL BE USED FOR THE WORK SHOWN ON THIS PLAN: MD-104.04-01.
2. FUTURE SIGN SHOWN FOR SPACING PURPOSES ONLY. SIGN NOT TO BE INSTALLED IN THIS CONTRACT.
3. INSTALL PLOWABLE RAISED PAVEMENT MARKERS AS PER THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THROUGHOUT LIMITS OF PROPOSED PAVING ON MD 175 AND RAMPS WITHIN SHA RIGHT OF WAY.
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5. ALL SIGNS SHOWN ON THIS PLAN WILL BE FINAL OWNERSHIP AND MAINTENANCE RESPONSIBILITY OF MSHA - MARYLAND STATE HIGHWAY ADMINISTRATION.

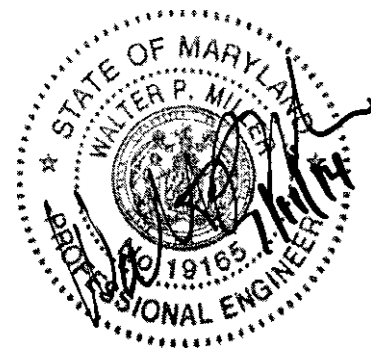


PAVEMENT MARKING LEGEND

- (A) 5 IN. SOLID WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
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- (Q) HOWARD COUNTY STANDARD CROSSWALK - PREFORMED THERMOPLASTIC (SEE SHEET SN-2.02 FOR DETAILS)
- (R) 10 INCH WHITE PAVEMENT MARKING PAINT LINES

SIGN LEGEND

- EXISTING GROUND MOUNTED SIGN AND SUPPORT(S)
- PROPOSED GROUND MOUNTED SIGN AND SUPPORT(S)
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN
- EXISTING CANTILEVER STRUCTURE
- SIGN NO.
- TRAFFIC FLOW ARROW



"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."



WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, Maryland 21231

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND.			
<i>Ray</i>	7/15/14	<i>James B. Butler</i>	7/15/14
DIRECTOR OF PUBLIC WORKS	DATE	CHIEF, BUREAU OF ENGINEERING	DATE
<i>John Seaman</i>	7/11/14	<i>Steve Shaver</i>	7/11/14
CHIEF, BUREAU OF HIGHWAYS	DATE	CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION	DATE

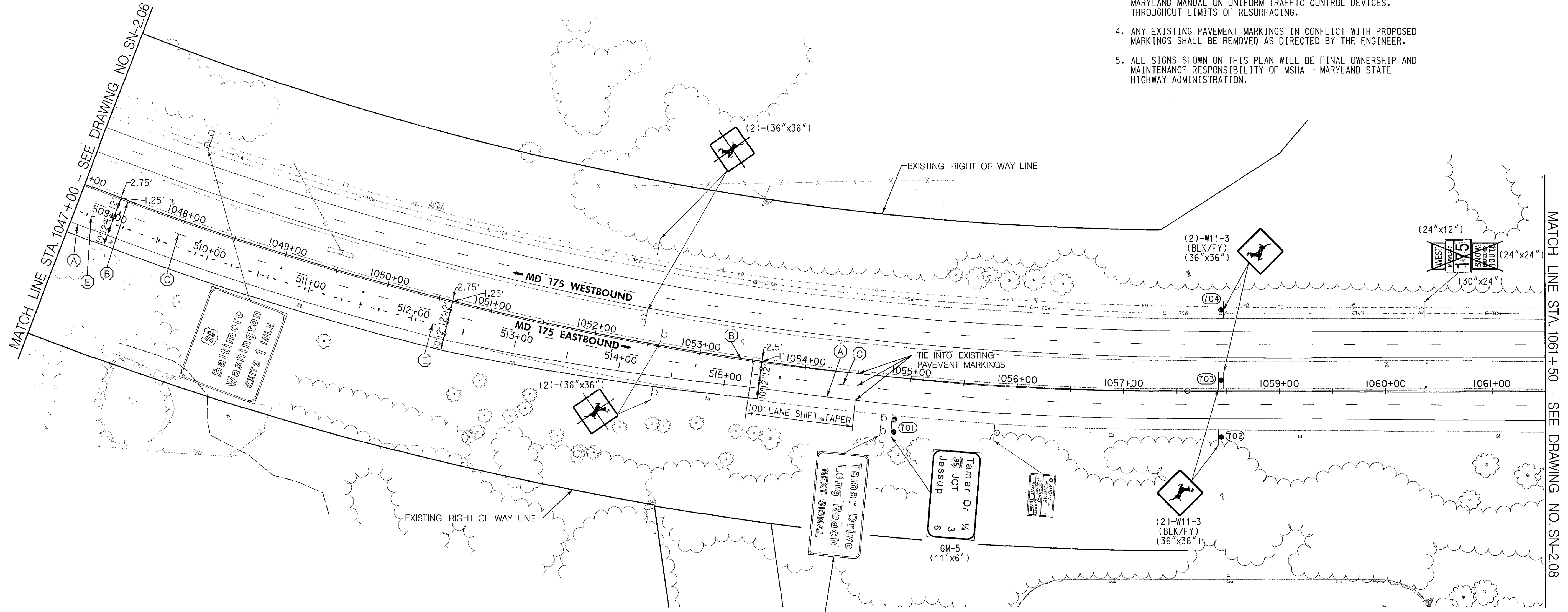
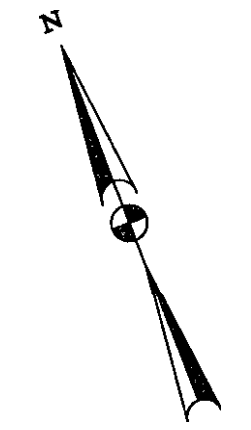


STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
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BLANDAIR REGIONAL PARK
PHASE J -- SOUTH

REVISIONS	SIGNING AND MARKING PLAN		
	SCALE 1" = 50'	DATE 7/11/2014	CONTRACT NO. J-4237
	DESIGNED BY WRA	COUNTY HOWARD COUNTY	
	DRAWN BY WRA	LOGMILE 13017505.10 - 13017506.18	
	CHECKED BY J. MOCNY	TIMS NO.	
	F.A.P. NO. NA	TOD NO.	
	DRAWING NO. SN-2.06 OF 10	SHEET NO. 116 OF 138	

GENERAL NOTES:

1. AT A MINIMUM, THE FOLLOWING MSHA WORK ZONE TRAFFIC CONTROL (WZTC) TYPICALS SHALL BE USED FOR THE WORK SHOWN ON THIS PLAN: MD-104.04-01 AND MD-104.04-03
2. RELOCATE EXISTING SIGN TO NEW SIGN SUPPORTS SEE SN-2.08 FOR PROPOSED SIGN LOCATION.
3. INSTALL PLOWABLE RAISED PAVEMENT MARKERS AS PER THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THROUGHOUT LIMITS OF RESURFACING.
4. ANY EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED MARKINGS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
5. ALL SIGNS SHOWN ON THIS PLAN WILL BE FINAL OWNERSHIP AND MAINTENANCE RESPONSIBILITY OF MSHA - MARYLAND STATE HIGHWAY ADMINISTRATION.

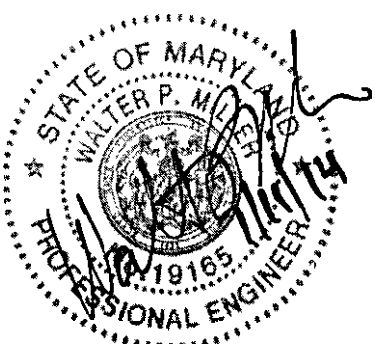


PAVEMENT MARKING LEGEND

- (A) 5 IN. SOLID WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (B) 5 IN. SOLID YELLOW PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (C) 5 IN. SKIP WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS (10 FOOT LINE WITH 30 FOOT GAP)
- (D) 10 IN. SOLID WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (E) 10 IN. SKIP WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS (3 FOOT LINE WITH 9 FOOT GAP)
- (F) 5 INCH YELLOW PAVEMENT MARKING PAINT LINES
- (G) 5 INCH WHITE PAVEMENT MARKING PAINT LINES
- (H) 5 IN. SKIP WHITE PAVEMENT MARKING PAINT LINES (2 FOOT LINE WITH 6 FOOT GAP)
- (J) 5 IN. SKIP WHITE PAVEMENT MARKING PAINT LINES (3 FOOT LINE WITH 9 FOOT GAP)
- (K) 12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
- (L) 12 INCH SKIP WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES (3 FOOT LINE WITH 3 FOOT GAP)
- (M) 24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
- (N) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
- (O) 5 INCH DOUBLE YELLOW PAVEMENT MARKING PAINT LINES
- (P) 10 INCH YELLOW PAVEMENT MARKING PAINT LINES
- (Q) HOWARD COUNTY STANDARD CROSSWALK - PREFORMED THERMOPLASTIC (SEE SHEET SN-2.02 FOR DETAILS)
- (R) 10 INCH WHITE PAVEMENT MARKING PAINT LINES

SIGN LEGEND

- EXISTING GROUND MOUNTED SIGN AND SUPPORT(S)
- PROPOSED GROUND MOUNTED SIGN AND SUPPORT(S)
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN
- EXISTING CANTILEVER STRUCTURE
- SIGN NO.
- TRAFFIC FLOW ARROW



"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."



WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, Maryland 21231

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

John P. De... 7/11/14
DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING

Steve Sharav 7/11/14
CHIEF, BUREAU OF HIGHWAYS DATE CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION

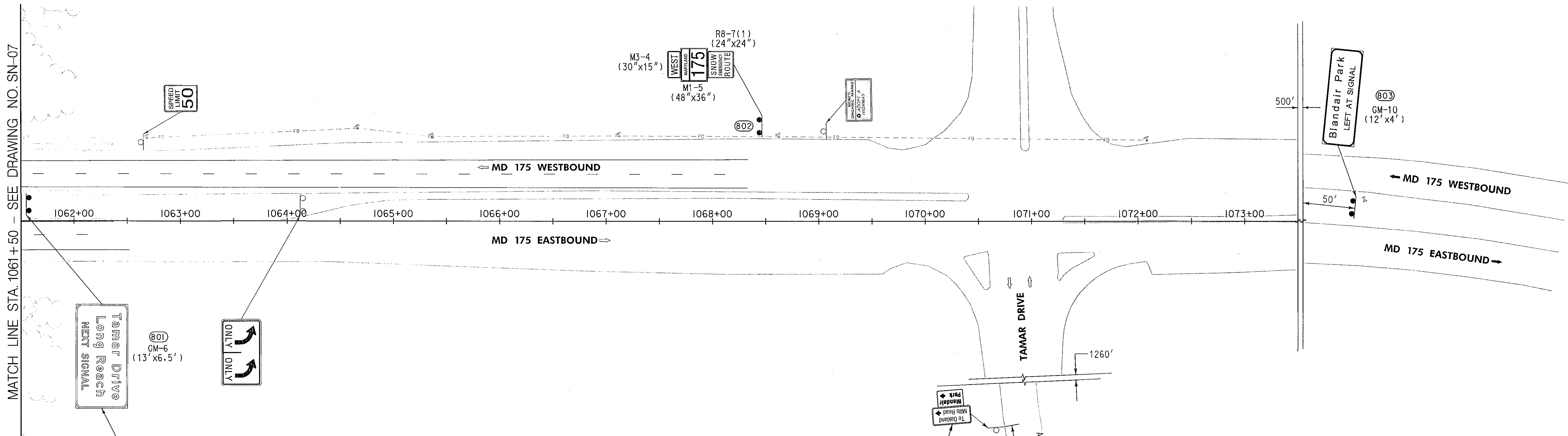
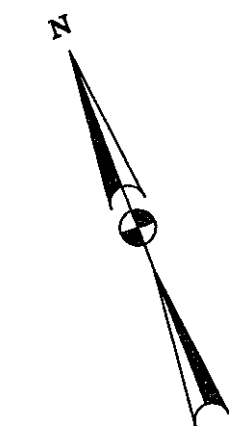
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
BLANDAIR REGIONAL PARK
PHASE J - SOUTH

REVISIONS	SIGNING AND MARKING PLAN	
	SCALE 1" = 50'	DATE 7/11/2014 CONTRACT NO. J-4237
	DESIGNED BY WRA	COUNTY HOWARD COUNTY
	DRAWN BY WRA	LOGMILE 13017505.10 - 13017506.18
	CHECKED BY J.MOCNY	TIMS NO.
	F.A.P. NO. N/A	TOD NO.
	DRAWING NO. SN-2.07 OF 10	SHEET NO. 117 OF 138

FLOTTED: July 08, 2014
FILE: N:\42038-00\CADD\pSN-2007_BPJ.dgn

GENERAL NOTES:

1. AT A MINIMUM, THE FOLLOWING MSHA WORK ZONE TRAFFIC CONTROL (WZTC) TYPICALS SHALL BE USED FOR THE WORK SHOWN ON THIS PLAN: MD-104.04-01, MD-104.04-03 AND MD-104.04-05.
2. RELOCATED EXISTING SIGN ON NEW SIGN SUPPORTS. SEE SN-2.07 FOR EXISTING SIGN LOCATION.
3. ALL SIGNS SHOWN ON THIS PLAN, EXCEPT "TO OAKLAND MILLS ROAD & BLANDAIR PARK" SIGNS, WILL BE FINAL OWNERSHIP AND MAINTENANCE RESPONSIBILITY OF MSHA - MARYLAND STATE HIGHWAY ADMINISTRATION. "TO OAKLAND MILLS ROAD & BLANDAIR PARK" SIGNS WILL BE FINAL OWNERSHIP AND MAINTENANCE RESPONSIBILITY OF HOWARD COUNTY.



MATCH LINE STA. 1061+50 - SEE DRAWING NO. SN-07

SEE GENERAL NOTE 2

PAVEMENT MARKING LEGEND

- (A) 5 IN. SOLID WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (B) 5 IN. SOLID YELLOW PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (C) 5 IN. SKIP WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS (10 FOOT LINE WITH 30 FOOT GAP)
- (D) 10 IN. SOLID WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (E) 10 IN. SKIP WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS (3 FOOT LINE WITH 9 FOOT GAP)
- (F) 5 INCH YELLOW PAVEMENT MARKING PAINT LINES
- (G) 5 INCH WHITE PAVEMENT MARKING PAINT LINES
- (H) 5 IN. SKIP WHITE PAVEMENT MARKING PAINT LINES (2 FOOT LINE WITH 6 FOOT GAP)
- (J) 5 IN. SKIP WHITE PAVEMENT MARKING PAINT LINES (3 FOOT LINE WITH 9 FOOT GAP)
- (K) 12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
- (L) 12 INCH SKIP WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES (3 FOOT LINE WITH 3 FOOT GAP)
- (M) 24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
- (N) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
- (O) 5 INCH DOUBLE YELLOW PAVEMENT MARKING PAINT LINES
- (P) 10 INCH YELLOW PAVEMENT MARKING PAINT LINES
- (Q) HOWARD COUNTY STANDARD CROSSWALK - PREFORMED THERMOPLASTIC (SEE SHEET SN-2.02 FOR DETAILS)
- (R) 10 INCH WHITE PAVEMENT MARKING PAINT LINES

SIGN LEGEND	
	EXISTING GROUND MOUNTED SIGN AND SUPPORT(S)
	PROPOSED GROUND MOUNTED SIGN AND SUPPORT(S)
	EXISTING SIGN TO REMAIN
	EXISTING SIGN TO BE REMOVED
	PROPOSED SIGN
	EXISTING CANTILEVER STRUCTURE
	SIGN NO.
	TRAFFIC FLOW ARROW

SEE GENERAL NOTE 3

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

<i>John J. ...</i> DIRECTOR OF PUBLIC WORKS	<i>2/11/14</i> DATE	<i>Thomas B. ...</i> CHIEF, BUREAU OF ENGINEERING
<i>John S. ...</i> CHIEF, BUREAU OF HIGHWAYS	<i>7-11-14</i> DATE	<i>Steve ...</i> CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION

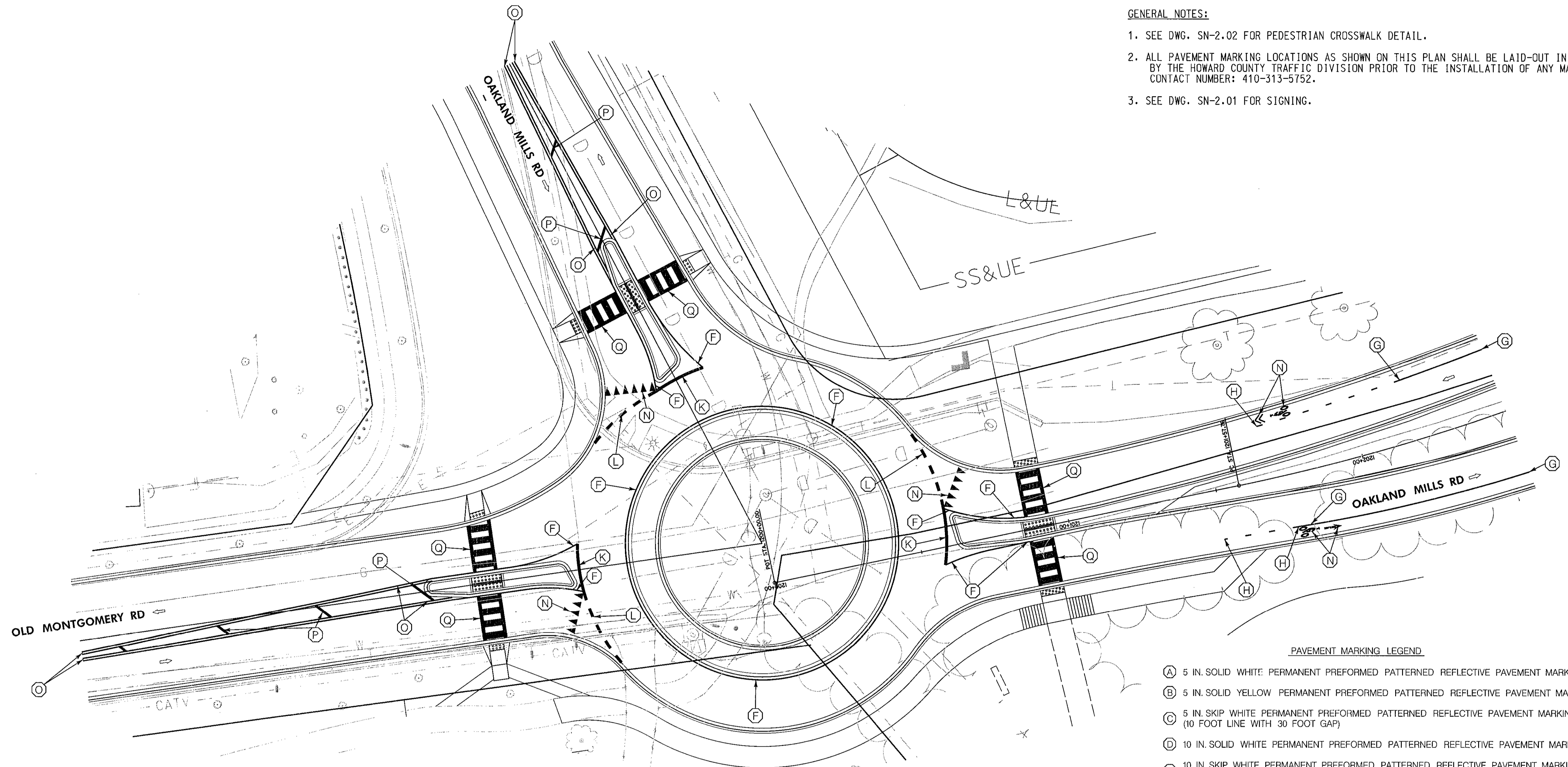
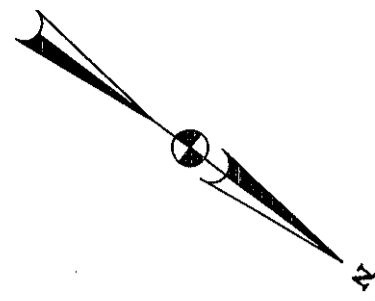
SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
BLANDAIR REGIONAL PARK
PHASE J - SOUTH

REVISIONS	SIGNING AND MARKING PLAN	
	SCALE: 1" = 50'	DATE: 7/11/2014 CONTRACT NO.: J-4237
	DESIGNED BY: WRA	COUNTY: HOWARD COUNTY
	DRAWN BY: WRA	LOGMILE: 13017505.10 - 13017506.18
	CHECKED BY: J. MOGNY	TIMS NO.:
	F.A.P. NO.:	TOD NO.:
	DRAWING NO. SN-2.08 OF 10	SHEET NO. 118 OF 138



"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."

WR&A
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, Maryland 21231



GENERAL NOTES:

1. SEE DWG. SN-2.02 FOR PEDESTRIAN CROSSWALK DETAIL.
2. ALL PAVEMENT MARKING LOCATIONS AS SHOWN ON THIS PLAN SHALL BE LAID-OUT IN THE FIELD BY THE HOWARD COUNTY TRAFFIC DIVISION PRIOR TO THE INSTALLATION OF ANY MARKINGS. CONTACT NUMBER: 410-313-5752.
3. SEE DWG. SN-2.01 FOR SIGNING.

PAVEMENT MARKING LEGEND

- (A) 5 IN. SOLID WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (B) 5 IN. SOLID YELLOW PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (C) 5 IN. SKIP WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS (10 FOOT LINE WITH 30 FOOT GAP)
- (D) 10 IN. SOLID WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (E) 10 IN. SKIP WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS (3 FOOT LINE WITH 9 FOOT GAP)
- (F) 5 INCH YELLOW PAVEMENT MARKING PAINT LINES
- (G) 5 INCH WHITE PAVEMENT MARKING PAINT LINES
- (H) 5 IN. SKIP WHITE PAVEMENT MARKING PAINT LINES (2 FOOT LINE WITH 6 FOOT GAP)
- (J) 5 IN. SKIP WHITE PAVEMENT MARKING PAINT LINES (3 FOOT LINE WITH 9 FOOT GAP)
- (K) 12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
- (L) 12 INCH SKIP WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES (3 FOOT LINE WITH 3 FOOT GAP)
- (M) 24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
- (N) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
- (O) 5 INCH DOUBLE YELLOW PAVEMENT MARKING PAINT LINES
- (P) 10 INCH YELLOW PAVEMENT MARKING PAINT LINES
- (Q) HOWARD COUNTY STANDARD CROSSWALK -- PREFORMED THERMOPLASTIC (SEE SHEET SN-2.02 FOR DETAILS)
- (R) 10 INCH WHITE PAVEMENT MARKING PAINT LINES

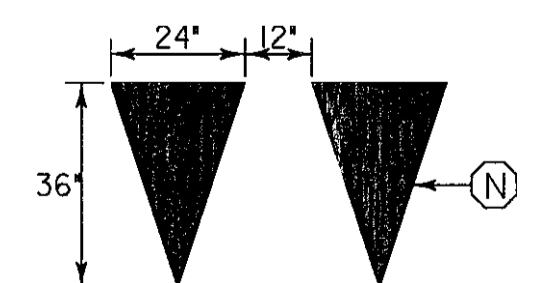
SIGN LEGEND

- EXISTING GROUND MOUNTED SIGN AND SUPPORT(S)
- PROPOSED GROUND MOUNTED SIGN AND SUPPORT(S)
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN
- EXISTING CANTILEVER STRUCTURE
- SIGN NO.
- TRAFFIC FLOW ARROW

SPECIAL NOTE:

PAVEMENT MARKING PAINT LINES REQUIRE A DOUBLE APPLICATION ON NEWLY SURFACED ROADWAY. THE QUANTITIES HAVE BEEN INCREASED ACCORDINGLY.

YIELD LINE DETAIL



"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

John J. ... 7/13/14
DIRECTOR OF PUBLIC WORKS DATE

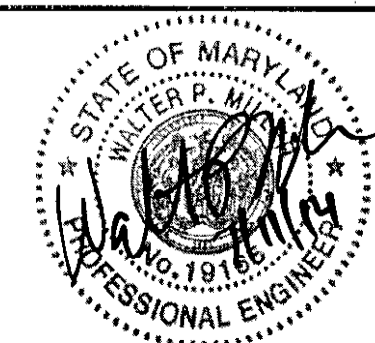
Marcus E. ... 7/14/14
CHIEF, BUREAU OF ENGINEERING DATE

Halger ... 7-11-14
CHIEF, BUREAU OF HIGHWAYS DATE

Steve ... 7/14/14
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

WR&A



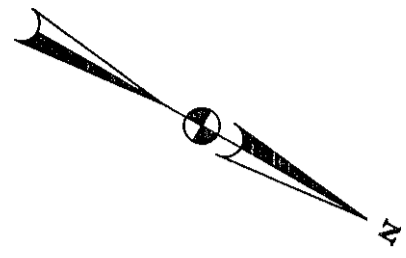
DES: WRA
DRN: WHA
CHK: J.MOCNY
DATE: 7/1/2014

SIGNING & MARKING PLAN

TAX MAP 36 BLOCK NO. 5 ELECTION DISTRICT 3/7 HOWARD COUNTY, MARYLAND

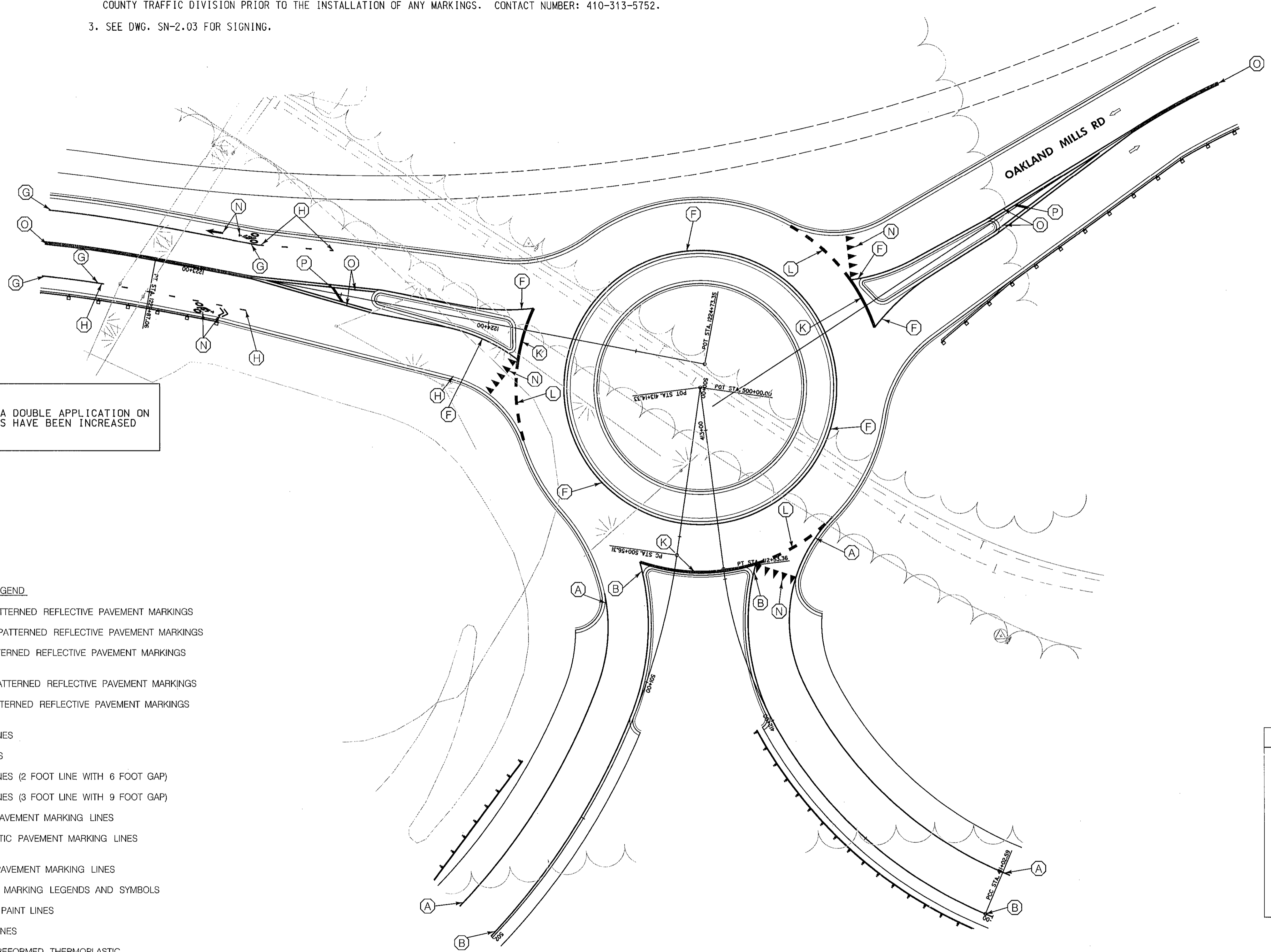
**BLANDAIR REGIONAL PARK
PHASE J - SOUTH
CAPITAL PROJECT # J-4237**

DWG. SN-2.09
SCALE 1" = 20'
SHEET 119 OF 138



GENERAL NOTES:

1. SEE DWG. SN-2.09 FOR YIELD LINE DETAIL.
2. ALL PAVEMENT MARKING LOCATIONS AS SHOWN ON THIS PLAN SHALL BE LAID-OUT IN THE FIELD BY THE HOWARD COUNTY TRAFFIC DIVISION PRIOR TO THE INSTALLATION OF ANY MARKINGS. CONTACT NUMBER: 410-313-5752.
3. SEE DWG. SN-2.03 FOR SIGNING.



SPECIAL NOTE:
PAVEMENT MARKING PAINT LINES REQUIRE A DOUBLE APPLICATION ON NEWLY SURFACED ROADWAY. THE QUANTITIES HAVE BEEN INCREASED ACCORDINGLY.

PAVEMENT MARKING LEGEND

- (A) 5 IN. SOLID WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (B) 5 IN. SOLID YELLOW PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (C) 5 IN. SKIP WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS (10 FOOT LINE WITH 30 FOOT GAP)
- (D) 10 IN. SOLID WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (E) 10 IN. SKIP WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS (3 FOOT LINE WITH 9 FOOT GAP)
- (F) 5 INCH YELLOW PAVEMENT MARKING PAINT LINES
- (G) 5 INCH WHITE PAVEMENT MARKING PAINT LINES
- (H) 5 IN. SKIP WHITE PAVEMENT MARKING PAINT LINES (2 FOOT LINE WITH 6 FOOT GAP)
- (J) 5 IN. SKIP WHITE PAVEMENT MARKING PAINT LINES (3 FOOT LINE WITH 9 FOOT GAP)
- (K) 12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
- (L) 12 INCH SKIP WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES (3 FOOT LINE WITH 3 FOOT GAP)
- (M) 24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
- (N) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
- (O) 5 INCH DOUBLE YELLOW PAVEMENT MARKING PAINT LINES
- (P) 10 INCH YELLOW PAVEMENT MARKING PAINT LINES
- (Q) HOWARD COUNTY STANDARD CROSSWALK -- PREFORMED THERMOPLASTIC (SEE SHEET SN-2.02 FOR DETAILS)
- (R) 10 INCH WHITE PAVEMENT MARKING PAINT LINES

SIGN LEGEND	
	EXISTING GROUND MOUNTED SIGN AND SUPPORT(S)
	PROPOSED GROUND MOUNTED SIGN AND SUPPORT(S)
	EXISTING SIGN TO REMAIN
	EXISTING SIGN TO BE REMOVED
	PROPOSED SIGN
	EXISTING CANTILEVER STRUCTURE
	SIGN NO.
	TRAFFIC FLOW ARROW

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

Kaplan 7/15/14
DIRECTOR OF PUBLIC WORKS DATE

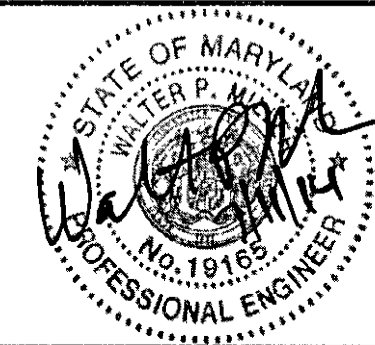
Momas & Buttle 7/15/14
CHIEF, BUREAU OF ENGINEERING DATE

Hulgen Seaman 7/11/14
CHIEF, BUREAU OF HIGHWAYS DATE

Steve Shanon 7/15/14
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

WR&A



DES:	WRA
DRN:	WRA
CHK:	WRA
DATE:	7/11/2014

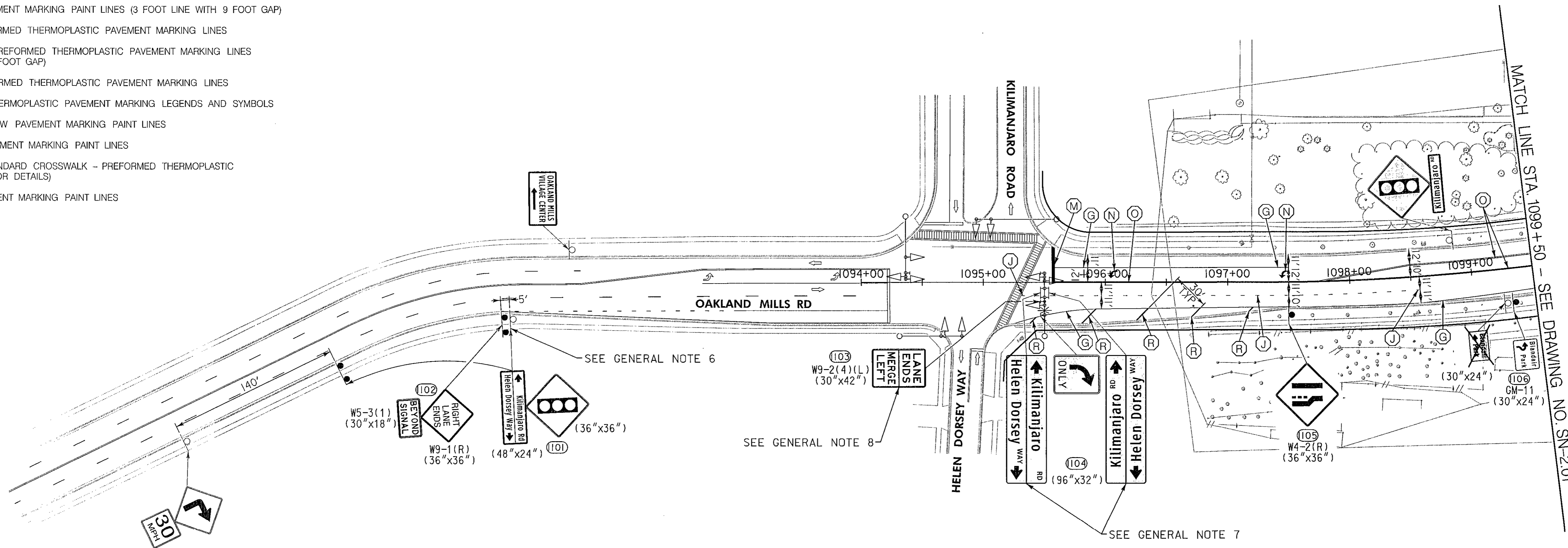
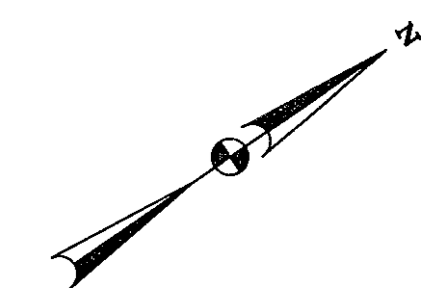
SIGNING & MARKING PLAN

**BLANDAIR REGIONAL PARK
PHASE J - SOUTH
CAPITAL PROJECT # J-4237**

DWG. SN-2.10
SCALE 1" = 20'
SHEET 120 OF 138

PAVEMENT MARKING LEGEND

- (A) 5 IN. SOLID WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (B) 5 IN. SOLID YELLOW PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (C) 5 IN. SKIP WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS (10 FOOT LINE WITH 30 FOOT GAP)
- (D) 10 IN. SOLID WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS
- (E) 10 IN. SKIP WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS (3 FOOT LINE WITH 9 FOOT GAP)
- (F) 5 INCH YELLOW PAVEMENT MARKING PAINT LINES
- (G) 5 INCH WHITE PAVEMENT MARKING PAINT LINES
- (H) 5 IN. SKIP WHITE PAVEMENT MARKING PAINT LINES (2 FOOT LINE WITH 6 FOOT GAP)
- (J) 5 IN. SKIP WHITE PAVEMENT MARKING PAINT LINES (3 FOOT LINE WITH 9 FOOT GAP)
- (K) 12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
- (L) 12 INCH SKIP WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES (3 FOOT LINE WITH 3 FOOT GAP)
- (M) 24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
- (N) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
- (O) 5 INCH DOUBLE YELLOW PAVEMENT MARKING PAINT LINES
- (P) 10 INCH YELLOW PAVEMENT MARKING PAINT LINES
- (Q) HOWARD COUNTY STANDARD CROSSWALK - PREFORMED THERMOPLASTIC (SEE SHEET SN-2.02 FOR DETAILS)
- (R) 10 INCH WHITE PAVEMENT MARKING PAINT LINES



GENERAL NOTES:

1. AT A MINIMUM, THE FOLLOWING MSHA WORK ZONE TRAFFIC CONTROL (WZTC) TYPICALS SHALL BE USED FOR THE WORK SHOWN ON THIS PLAN: MD 104.02-10 AND MD 104.02-14.
2. ANY EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED MARKINGS SHALL BE REMOVED BY GRINDING AS DIRECTED BY THE ENGINEER.
3. ALL SIGNS SHOWN ON THIS PLAN WILL BE FINAL OWNERSHIP AND MAINTENANCE RESPONSIBILITY OF HOWARD COUNTY.
4. ALL SIGN LOCATIONS ALONG HOWARD COUNTY ROADWAYS AS SHOWN ON THESE PLANS ARE APPROXIMATE AND MUST BE APPROVED IN THE FIELD BY HOWARD COUNTY TRAFFIC DIVISION PRIOR TO THE INSTALLATION OF ANY SIGNS. ALL PAVEMENT MARKING LOCATIONS AS SHOWN ON THESE PLANS SHALL BE LAID-OUT IN THE FIELD BY THE HOWARD COUNTY TRAFFIC DIVISION PRIOR TO THE INSTALLATION OF ANY MARKINGS. CONTACT NUMBER: 410-313-5752.
5. ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN HOWARD COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH" TYPE), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
6. RELOCATE EXISTING SIGNS ONLY, EXISTING SIGN SUPPORT TO BE REMOVED.
7. RELOCATE SIGNAL MAST ARM MOUNTED STREET NAME SIGNS CLOSER TO THE 5 SECTION SIGNAL HEAD FOR SOUTHBOUND OAKLAND MILLS TRAFFIC IN ORDER TO ADD PROPOSED "LANE ENDS MERGE LEFT" SIGN.
8. INSTALL SIGN CENTERED OVER RIGHT LANE TO SIGNAL MAST ARM ON A PELCO ASTRO SIGN-BRAC, TALLON CABLE MOUNT, FORMED TUBE OR APPROVED EQUAL, AS APPROVED BY THE ENGINEER. ALL HARDWARE SHALL BE STAINLESS STEEL. ALL MOUNTING HARDWARE WILL NOT BE PAID FOR BUT WILL BE INCIDENTAL TO SHEET ALUMINUM SIGNS ITEM.

SIGN LEGEND	
	EXISTING GROUND MOUNTED SIGN AND SUPPORT(S)
	PROPOSED GROUND MOUNTED SIGN AND SUPPORT(S)
	EXISTING SIGN TO REMAIN
	EXISTING SIGN TO BE REMOVED
	PROPOSED SIGN
	EXISTING CANTILEVER STRUCTURE
	SIGN NO.
	TRAFFIC FLOW ARROW

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

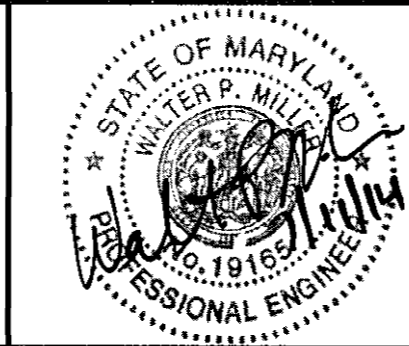
John P. O'Neil 7/15/14
DIRECTOR OF PUBLIC WORKS DATE

Monica B. Butler 7/11/14
CHIEF, BUREAU OF ENGINEERING DATE

Steve Sharan 7/11/14
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

WR&A



DES:	WRA
DRN:	WRA
CHK:	WRA
DATE:	7/11/2014
BY:	NO.
REVISION:	
DATE:	

SIGNING & MARKING PLAN

TAX MAP 36 BLOCK NO. 5

**BLANDAIR REGIONAL PARK
PHASE J - SOUTH**

CAPITAL PROJECT # J-4237

ELECTION DISTRICT 3 / 7 HOWARD COUNTY, MARYLAND

DWG. **SN-2.11**

SCALE 1" = 50'

SHEET **121** OF **138**

PANEL DESIGNATION	SHEET NO.	QUANTITY	LEGEND		SIZE		COLOR		BORDER		SHIELD	REMARKS
			AREA	WIDTH	HEIGHT	LEGEND	BCKGRND	WIDTH	RADIUS	ARROW		
GM-1	SN-2.02	1	72	8'-0"	9'-0"	W	G	2'	12"	MI-5 (22.5" x 18") MI-4 (18" x 18") MI-1 (18" x 18")	EXTRUDED ALUMINUM (CLEARVIEW TYPE SYSTEM)	
GM-2	SN-2.03	1	48	8'-0"	6'-0"	W	G	2'	9"	MI-5 (22.5" x 18") MI-1 (18" x 18")	EXTRUDED ALUMINUM (CLEARVIEW TYPE SYSTEM)	
GM-3	SN-2.04	1	54	18'-0"	3'-0"	W	G	2'	9"	--	EXTRUDED ALUMINUM (CLEARVIEW TYPE SYSTEM)	
			72	18'-0"	4'-0"	W	BRO	2'	9"	--	EXTRUDED ALUMINUM (CLEARVIEW TYPE SYSTEM)	
GM-4	SN-2.05	1	54	18'-0"	3'-0"	W	G	2'	9"	--	EXTRUDED ALUMINUM (CLEARVIEW TYPE SYSTEM)	
			72	18'-0"	4'-0"	W	BRO	2'	9"	ARW-10 A-2 45°	EXTRUDED ALUMINUM (CLEARVIEW TYPE SYSTEM)	

PANEL DESIGNATION	SHEET NO.	QUANTITY	LEGEND		SIZE		COLOR		BORDER		SHIELD	REMARKS
			AREA	WIDTH	HEIGHT	LEGEND	BCKGRND	WIDTH	RADIUS	ARROW		
GM-5	SN-2.07	1	66	11'-0"	6'-0"	W	G	2'	9"	MI-1 (18" x 18")	EXTRUDED ALUMINUM (CLEARVIEW TYPE SYSTEM)	
GM-8	SN-2.01	1	15.75	54"	42"	BLK	Y	SEE LEFT	1.5"	ARW-40 0° ARROW DET-1 0°	W2-6 (36" x 36")	SHEET ALUMINUM (FHWA STANDARD ALPHABET)
GM-9	SN-2.06	1	15	72"	30"	BLK	Y	SEE LEFT	1.5"	ARW-40 0° ARROW DET-1 0°	W2-6 (36" x 36")	SHEET ALUMINUM (FHWA STANDARD ALPHABET)

LEGEND & BACKGROUND COLORS: BLK=BLACK, BLU=BLUE, BRO=BROWN, G=GREEN, R=RED, W=WHITE/SILVER, Y=YELLOW

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.
7/8/14
7/11/14
7/11/14

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231



DES: WRA	
DRN: WRA	
CHK: J.MOCNY	
DATE: 7/11/2014	

GUIDE SIGN MESSAGES -DETAILS & DIMENSIONS

BLANDAIR REGIONAL PARK
PHASE J - SOUTH
CAPITAL PROJECT # J-4237
ELECTION DISTRICT 3 / 7
HOWARD COUNTY, MARYLAND

DWG. SN-3.01
SCALE NONE
SHEET 122 OF 138

PANEL DESIGNATION	SHEET NO.	QUANTITY	LEGEND		SIZE		COLOR		BORDER		ARROW	SHIELD	REMARKS	
					AREA	WIDTH	HEIGHT	LEGEND	BCKGRND	WIDTH				RADIUS
GM-10	SN-2.08	1			48	12'-0"	4'-0"	W	BRO	2"	9"	--	--	EXTRUDED ALUMINUM (CLEARVIEW TYPE SYSTEM)
GM-11	SN-2.11	1			5	30"	24"	W	BRO	0.75"	1.875"	ARW- (4) 0°	---	SHEET ALUMINUM (FHWA STANDARD ALPHABET)
GM-13	SN-2.01	1			5.25	36"	21"	BLK	Y	SEE LEFT	1.5"	--	W2-6 (30' x 30')	SHEET ALUMINUM (FHWA STANDARD ALPHABET)

PANEL DESIGNATION	SHEET NO.	QUANTITY	LEGEND		SIZE		COLOR		BORDER		ARROW	SHIELD	REMARKS	
					AREA	WIDTH	HEIGHT	LEGEND	BCKGRND	WIDTH				RADIUS
GM-14	SN-2.01	1			16	48"	48"	BLK	Y	SEE LEFT	1.5"	ARW- (4) MOD 0°	W2-6 (30' x 30')	SHEET ALUMINUM (FHWA STANDARD ALPHABET)

LEGEND & BACKGROUND COLORS: BLK=BLACK, BLU=BLUE, BRO=BROWN, G=GREEN, R=RED, W=WHITE/SILVER, Y=YELLOW

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

Ra. J. Chu 7/6/14
DIRECTOR OF PUBLIC WORKS DATE

Thomas J. Suttler 7/14/14
CHIEF, BUREAU OF ENGINEERING DATE

Adrian Sevens 7-11-14
CHIEF, BUREAU OF HIGHWAYS DATE

Steve Shaver 7/11/14
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

WR&A



DES:	WRA
DRN:	WRA
CHK:	J.MOCNY
DATE:	7/11/2014
BY:	NO.
REVISION:	
DATE:	

GUIDE SIGN MESSAGES -DETAILS & DIMENSIONS

**BLANDAIR REGIONAL PARK
PHASE J - SOUTH**

CAPITAL PROJECT # J-4237

ELECTION DISTRICT 3 / 7 HOWARD COUNTY, MARYLAND

DWG.
SN-3.02

SCALE
NONE

SHEET
123 OF **138**

GUIDE SIGN STEEL SUPPORT CHART

SIGN NO.	SIGN SIZE (WXH)	EXIT/AUX. PANELS	SHEET NO.	POST SIZE	*BW OR NBW	SUPPORT L-1	SUPPORT L-2	SUPPORT L-3	LATERAL CLEARANCE		SUPPORT SPACING FROM LEFT EDGE OF SIGN	C TO C OF SUPPORTS
									OFFSET	OBJECT**		
GM-1	8'x9'	---	SN-2.02	W8x21	BW	19'-0"	19'-6"	---	6'-0"	FOC	0.33' - 7.34' - 0.33'	7.34'
GM-2	8'x6'	---	SN-2.03	W6x9	BW	14'-0"	14'-0"	---	6'-0"	FOC	1.6' - 4.8' - 1.6'	4.8'
GM-3	18'x7'	---	SN-2.04	W8x21	NBW	18'-6"	16'-6"	---	6'-0"	W	3.6' - 10.8' - 3.6'	10.8'
GM-4	18'x7'	---	SN-2.05	W8x21	BW	17'-0"	18'-0"	---	6'-0"	ES	3.6' - 10.8' - 3.6'	10.8'
GM-5	11'x6'	---	SN-2.07	W6x12	BW	14'-6"	14'-0"	---	7'-6"	ES	2.2' - 6.6' - 2.2'	6.6'
GM-6	13'x6.5'	---	SN-2.08	W6x16	BW	15'-0"	15'-0"	---	6'-6"	CM	2.6' - 7.8' - 2.6'	7.8'
GM-7	7'x7'	---	SN-2.06	W6x9	BW	16'-0"	16'-6"	---	5.75'	CG	1.4' - 4.2' - 1.4'	4.2'

* BW = BREAKAWAY NBW = NON-BREAKAWAY

NOTES:

1. THE CONTRACTOR SHALL VERIFY THE FINAL FOUNDATION TYPE TO BE USED SO THAT THE FOUNDATION DOES NOT EXCEED A 4" PROJECTION ABOVE THE GROUND.
2. ALL NON-BREAKAWAY FOUNDATIONS SHALL BE TYPE A

STEEL BREAKAWAY SUPPORT FOUNDATION SELECTION MATRIX

POST SIZE	FOUNDATION DIAMETER	ROADWAY CUT / FILL SLOPE											
		≥2:l	3:l	4:l	5:l	6:l	7:l	8:l	9:l	10:l	12:l	≤13:l	
W6x9	30"	*	C	C	C	C	B	B	B	A	A	A	
W6x12 or TS 5'x5'x1/4"	30"	*	C	C	C	C	B	B	B	A	A	A	
W6x15 or TS 6'x6'x1/4"	30"	*	C	C	C	C	B	B	B	A	A	A	
W8x18	30"	*	C	C	C	C	B	B	B	A	A	A	
W8x21 or TS 7'x7'x1/4"	30"	*	C	C	C	C	B	B	B	A	A	A	
W10x22 or TS 8'x8'x3/8"	36"	*	*	C	C	C	C	B	B	B	A	A	
W10x26	36"	*	*	C	C	C	C	B	B	B	A	A	
W12x26	36"	*	*	C	C	C	C	B	B	B	A	A	
W14x30	36"	*	*	C	C	C	C	B	B	B	A	A	
W16x31	36"	*	*	C	C	C	C	B	B	B	A	A	
W18x35 or W18x40	36"	*	*	C	C	C	C	B	B	B	A	A	
W21x44	42"	*	*	C	C	C	C	B	B	B	A	A	

* IF A FOUNDATION EXCEEDS THE 4" AASHTO CRITERIA, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR APPROPRIATE GUIDANCE.

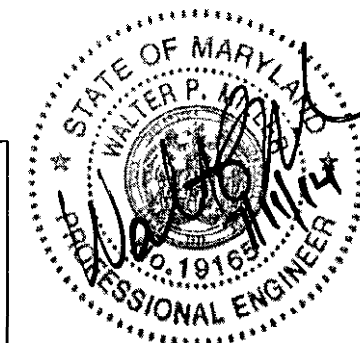
SEE MARYLAND STANDARD DRAWINGS FOR FOUNDATION DETAILS:

TYPE A = STANDARD MD 801.04
 TYPE B = STANDARD MD 801.04-01
 TYPE C = STANDARD MD 801.04-02



WHITMAN, REQUARDT & ASSOCIATES, LLP
 801 South Caroline Street, Baltimore, Maryland 21231

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."



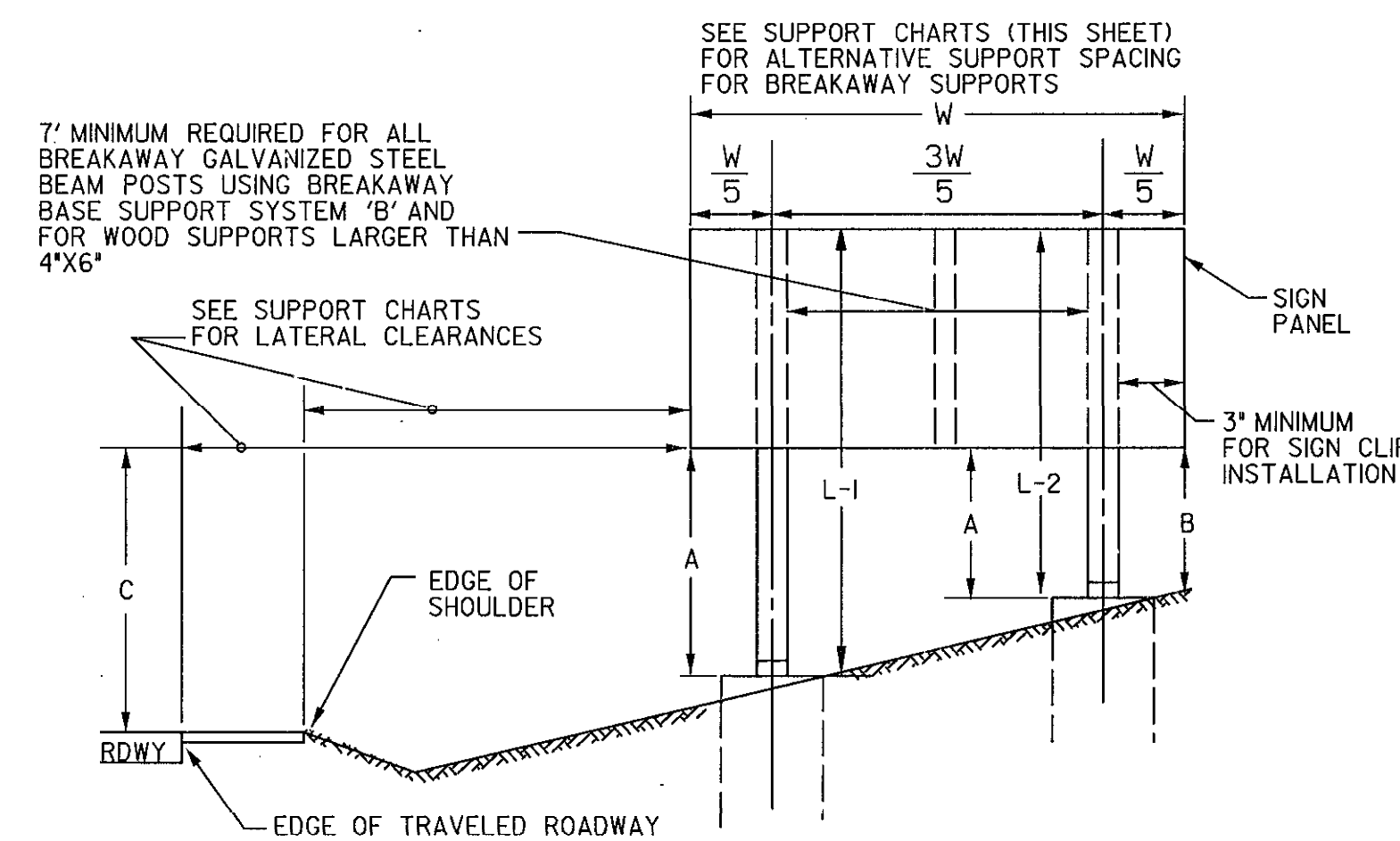
GUIDE SIGN WOOD SUPPORT CHART

SIGN NO.	SIGN SIZE (WXH)	SHEET NO.	POST SIZE	*BW OR NBW	SUPPORT L-1	SUPPORT L-2	L-3	LATERAL CLEARANCE		SUPPORT SPACING FROM LEFT EDGE OF SIGN
								OFFSET	OBJECT**	
GM-10	12'x4'	SN-2.08	6x8	BW	19'-0"	19'-0"	---	6.0'	CM	2.0' - 8.0' - 2.0'

* BW = BREAKAWAY NBW = NON-BREAKAWAY

NOTE: SEE MARYLAND STANDARDS 812.01, 812.04, AND 813.02 FOR WARNING AND REGULATORY SIGN INSTALLATION

SIGN CLEARANCE



VERTICAL CLEARANCE OF SIGNS

- A. 7'-6" MINIMUM FOR BREAKAWAY SUPPORTS OR 5'-0" FOR NON-BREAKAWAY SUPPORTS.
 - B. 2'-0" MINIMUM
 - C. 7'-6" MINIMUM & PREFERABLE. THIS DIMENSION IS TO BE INCREASED ONLY WHEN REQUIRED TO MEET A = 7'-6" FOR BREAKAWAY OR A (MIN.) = 5'-0" FOR NON-BREAKAWAY AND B (MIN.) = 2'-0"
- ALL DIMENSIONS ARE TO BOTTOM OF SIGN

*TOTAL WEIGHT BELOW THE HINGES SHOULD BE LESS THAN 600 POUNDS

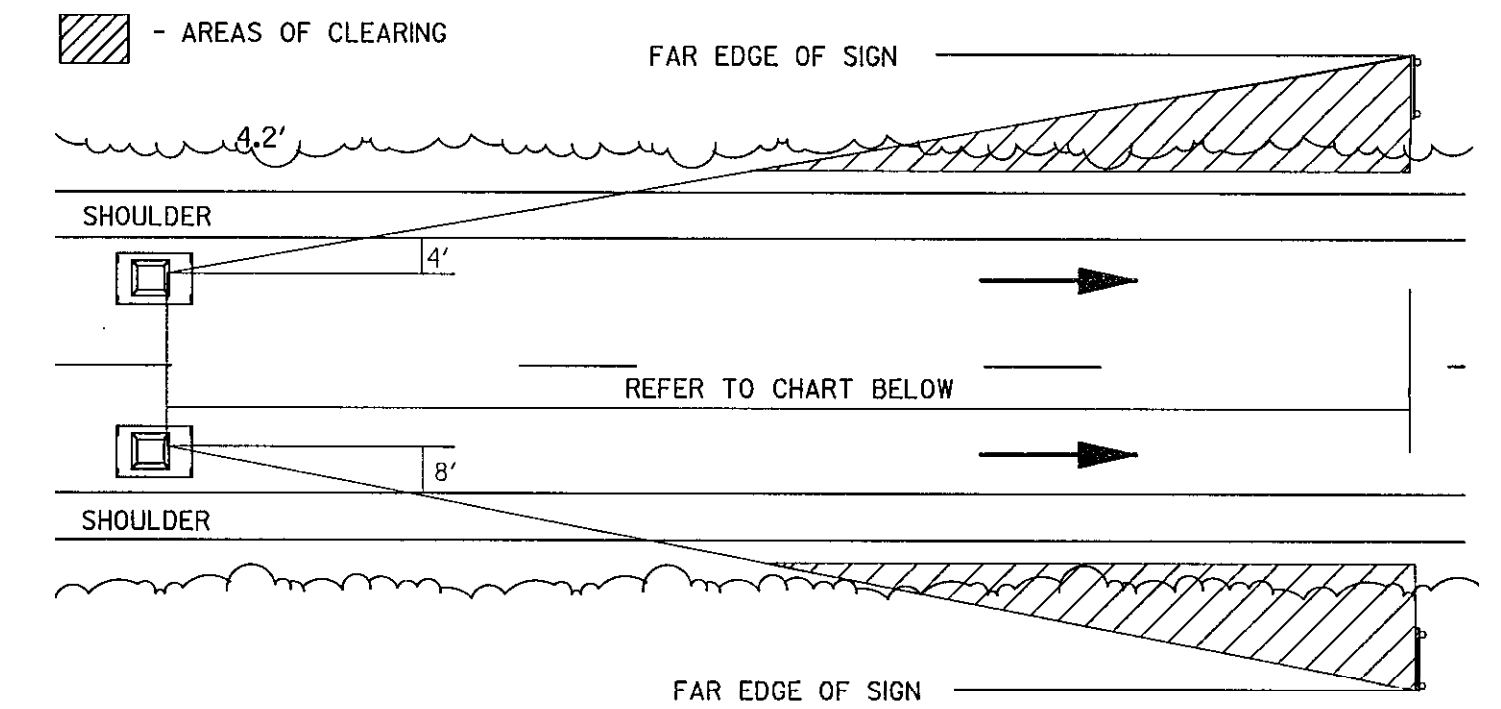
LATERAL CLEARANCE

SEE SUPPORT CHARTS

**OBJECT CODES

- W = FACE OF W-BEAM TRAFFIC BARRIER
- FOC = FACE OF CURB
- ES = EDGE OF SHOULDER
- ETR = EDGE OF TRAVELED ROADWAY
- CM = CENTERED IN MEDIAN
- CG = CENTERED IN GORE (6' MINIMUM FROM EDGE OF PAVEMENT)

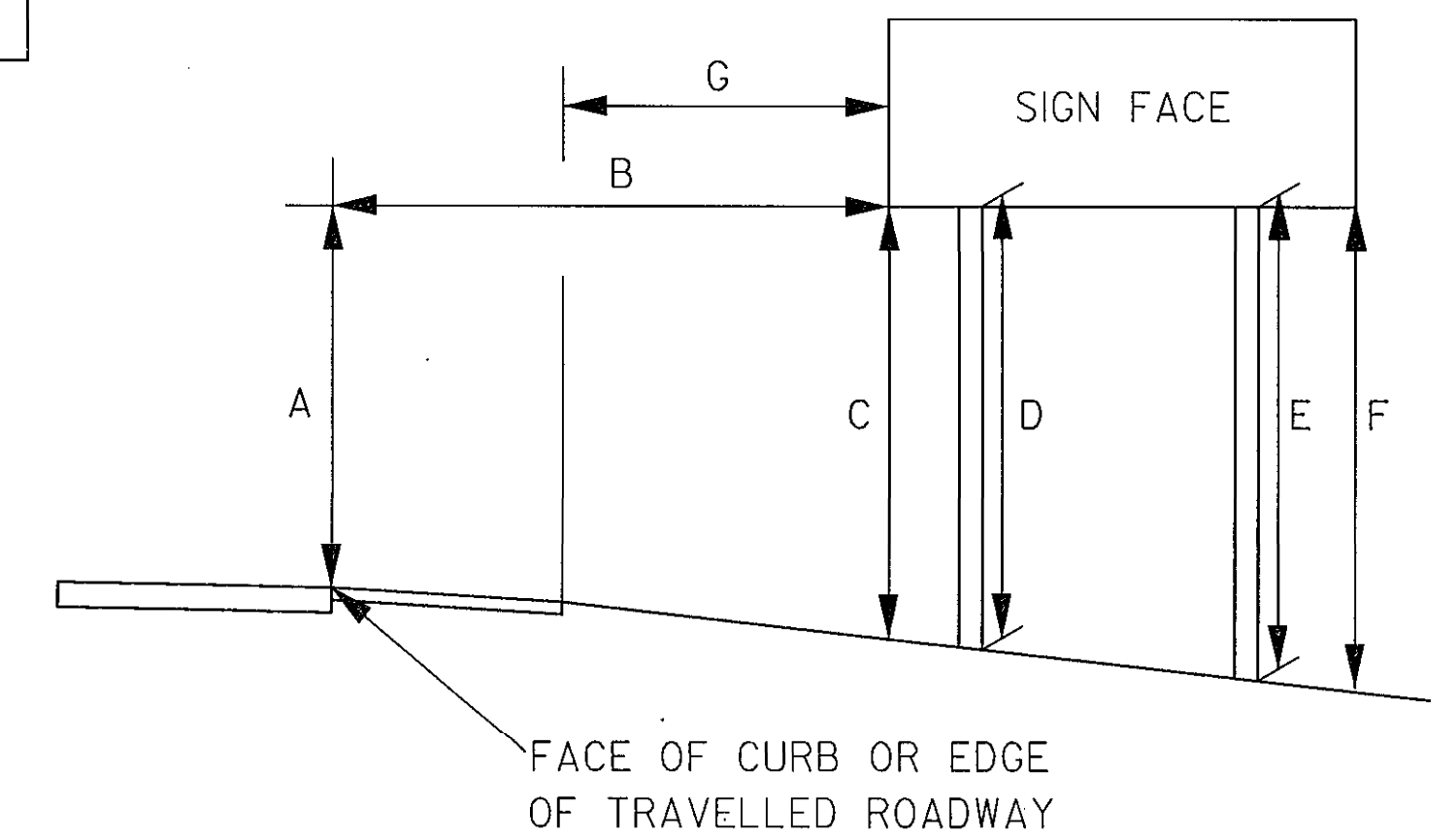
FOLIAGE CLEARING FOR SIGN INSTALLATIONS



Acceptable Viewing Distance for Sign

Copy Size	Distance
20" u.c.	1000 ft
16" u.c.	800 ft
13.3" u.c.	675 ft
10.67" u.c.	550 ft

SIGN STAKEOUT DIMENSIONS



NOTE: SEE SECTION 802 IN THE CONTRACT DOCUMENTS FOR SIGN STAKEOUT LOCATIONS.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND.

John G. ... 7/17/14
 DIRECTOR OF PUBLIC WORKS DATE

Thomas B. Butler 7/17/14
 CHIEF, BUREAU OF ENGINEERING DATE

John ... 7/17/14
 CHIEF, BUREAU OF HIGHWAYS DATE

... 7/17/14
 CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE



STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 OFFICE OF TRAFFIC & SAFETY
 TRAFFIC ENGINEERING DESIGN DIVISION
 BLANDAIR REGIONAL PARK
 PHASE J-- SOUTH

REVISIONS	GUIDE SIGN SUPPORT DETAILS	
	SCALE NONE	DATE 7/12/14 CONTRACT NO. J-4237
	DESIGNED BY WRA	COUNTY HOWARD COUNTY
	DRAWN BY WRA	LOGMILE 13017505.10 -- 13017506.18
	CHECKED BY J.MOCNY	TMS NO.
	F.A.P. NO. NA	TOD NO.
	DRAWING NO. SN-4.01	OF 1 SHEET NO. 124 OF 138

SHEET NO.	SIGN NO.	REMARKS	CODE NUMBERS *																									
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
SN-2.01	101	W2-6 (36"x36"), GM-8 (54"x42") 2 - 4"x6"	24.75				42																					
	102	W3-2 (36"x36"), W13-1P (18"x18") SQ.PER.TUB.STL.SP & AB	11.25					2																				
	103	R1-2 (30"x30"x30") SQ. PERFORATED TUBULAR STEEL SP & AB	2.71					1																				
	104	R9-3a (18"x18") SQ. PERFORATED TUBULAR STEEL SP & AB	2.25					1																				
	105	R1-2 (30"x30"x30"), D-3 (54"x18"), D-3 (54"x18") SQ.PER.TUB.STL.SP&AB	16.21					1																	13.75			
	106	R6-4 (30"x24") SQ. PERFORATED TUBULAR STEEL SP & AB	5					1																				
	107	R6-4 (30"x24") SQ. PERFORATED TUBULAR STEEL SP & AB	5					1																				
	108	W2-6 (30"x30"), GM-13 D-3(2)MOD (36"x21") SQ.PER.TUB.STL.SP & AB	11.5					2																				
	109	W3-2 (30"x30"), W13-1P (18"x18") SQ.PER.TUB.STL.SP & AB	8.5					1																				
	110	R4-7 (24"x30"), OM1-3 (18"x18"), OM1-3 (18"x18") SQ.PER.TUB.STL.SP&AB	9.5					1																				
	111	R1-2 (30"x30"x30") SQ. PERFORATED TUBULAR STEEL SP & AB	2.71					1																				
	113	R6-4 (30"x24") SQ. PERFORATED TUBULAR STEEL SP & AB	5					1																				
	114	R2-1 (24"x30") SQ. PERFORATED TUBULAR STEEL SP & AB	5					1																				
	115	R4-7 (24"x30"), OM1-3 (18"x18") SQ. PERFORATED TUBULAR STEEL SP & AB	7.25					1																				
	116	R4-7 (24"x30"), OM1-3 (18"x18") SQ. PERFORATED TUBULAR STEEL SP & AB	7.25					1																				
	117	W2-6 (30"x30"), GM-14 D-3(2)MOD (48"x48") 1 - 6"x8"	22.25																			20.5						
	118	W3-2 (30"x30"), W13-1P (18"x18") SQ.PER.TUB.STL.SP & AB	8.5					1																				
	119	R1-2 (30"x30"x30") SQ.PER.TUB.STL.SP & AB	2.71					1																				
	120	R4-7 (24"x30"), OM1-3 (18"x18"), OM1-3 (18"x18") SQ.PER.TUB.STL.SP&AB	9.5					1																				
	121	R1-2 (30"x30"x30"), D-3 (54"x18"), D-3 (54"x18") SQ.PER.TUB.STL.SP&AB	16.21					1																		13.75		
	122	R2-1 (24"x30") SQ. PERFORATED TUBULAR STEEL SP & AB	5					1																				
	123	W11-2(BLK/FYG)(30"x30"), W16-2pL(BLK/FYG)(24"x12") SQ.PER.TUB.STL.SP&AB	8.25					1																				
	124	RELOCATED EX. "BLANDAIR PARK" (30"x24") SQ. PERFORATED TUBULAR STEEL SP & AB						1																			5	
	125	W11-2(BLK/FYG)(30"x30"), W16-2pL(BLK/FYG)(24"x12") SQ.PER.TUB.STL.SP&AB	8.25					1																				
	126	W11-2(BLK/FYG)(30"x30"), W16-2pL(BLK/FYG)(24"x12") SQ.PER.TUB.STL.SP&AB	8.25					1																				
	127	R1-2 (30"x30"x30"), D-3 (60"x18"), D-3 (60"x18") SQ.PER.TUB.STL.SP & AB	18					1																				
	128	W11-2(BLK/FYG)(30"x30"), W16-2pL(BLK/FYG)(24"x12") SQ.PER.TUB.STL.SP&AB	8.25					1																			15	
	129	W11-2(BLK/FYG)(30"x30"), M5-2MOD(BLK/FYG)(21"x15") SQ.PER.TUB.STL.SP&AB	8.25					1																				
	130	R1-6a(2) (42"x36") SQ. PERFORATED TUBULAR STEEL SP & AB	10.5					2																				
		ITEM NO. 7							108.5																			
SN-2.02	201	R1-1 (30"x30") SQ. PERFORATED TUBULAR STEEL SP & AB	6.25					1																				
	202	R4-7 (24"x30"), OM1-3 (18"x18") SQ. PERFORATED TUBULAR STEEL SP & AB	7.25					1																				
	203	R4-7 (24"x30"), OM1-3 (18"x18") SQ. PERFORATED TUBULAR STEEL SP & AB	7.25					1																				
	204	R1-1 (30"x30") SQ. PERFORATED TUBULAR STEEL SP & AB	6.25					1																				
	205	R4-7 (24"x30"), OM1-3 (18"x18") SQ. PERFORATED TUBULAR STEEL SP & AB	7.25					1																				
	206	R4-7 (24"x30"), OM1-3 (18"x18") SQ. PERFORATED TUBULAR STEEL SP & AB	7.25					1																				
	207	R4-7 (24"x30"), OM1-3 (18"x18") SQ. PERFORATED TUBULAR STEEL SP & AB	7.25					1																				
	208	GM-1 (8'x9') 2 - (W8x21) GALVANIZED STEEL BEAMS	2.4		72					2				38.5														
	209	R2-1 (24"x30") SQ. PERFORATED TUBULAR STEEL SP & AB	5					1																				
	210	W3-2 (36"x36"), W13-1P (24"x24") SQ. PERFORATED TUBULAR STEEL SP & AB	13					2																				
	211	R1-1 (24"x24") SQ. PERFORATED TUBULAR STEEL SP & AB	4					1																				
	212	R2-1 (24"x30") SQ. PERFORATED TUBULAR STEEL SP & AB	5					1																				
	213	W2-6 (36"x36") SQ. PERFORATED TUBULAR STEEL SP & AB	9					1																				
SUBTOTALS FOR SN-11.01			2.4	342.55	72	0	42	43	108.5	2	0	0	0	38.5	0	0	0	0	0	0	0	20.5	5	0	42.5	0	0	

NOTE:

2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH" TYPE), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."

* CODE NUMBER DESCRIPTION & UNIT					
CODE NUMBERS	DESCRIPTION	UNIT	CODE NUMBERS	DESCRIPTION	UNIT
1	CONCRETE FOR SIGN FOUNDATION	CY	13	5' WHITE PERM PREFORMED PATTERNED REFL PVMT MARKINGS	LF
2	SHEET ALUMINUM SIGNS	SF	14	5' YELLOW PERM PREFORMED PATTERNED REFL PVMT MARKINGS	LF
3	EXTRUDED ALUMINUM SIGNS	SF	15	10' WHITE PERM PREFORMED PATTERNED REFL PVMT MARKINGS	LF
4	WOOD SIGN SUPPORTS 4' x 4'	LF	16	5' WHITE PAVEMENT MARKING PAINT LINES	LF
5	WOOD SIGN SUPPORTS 4' x 6'	LF	17	12' WHITE PREFORMED THERMOPLASTIC PVMT MARKINGS	EA
6	SQUARE PERFORATED TUBULAR STEEL SIGN POST & ANCHOR BASE (SEE NOTE)	LF	18	24' WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PVMT MARKINGS	EA
			19	WHITE PREFORMED THERMOPLASTIC PVMT MARKING LEGENDS & SYMBOLS	SF
7	REMOVE EXISTING GROUND MOUNTED SIGNS & SUPPORTS	SF	20	5' YELLOW PAVEMENT MARKING PAINT LINES	LF
8	BREAKAWAY BASE SUPPORT SYSTEM FOR STEEL BEAMS	EA	21	WOOD SIGN SUPPORTS 6' x 8"	LF
9	GALVANIZED STEEL BEAM (W6X9)	LF	22	RELOCATE EXISTING GROUND MOUNTED SIGNS	SF
10	GALVANIZED STEEL BEAM (W6X12)	LF	23	10' YELLOW PAVEMENT MARKING PAINT LINES	LF
11	GALVANIZED STEEL BEAM (W6X16)	LF	24	INSTALL SHEET ALUMINUM SIGN	SF
12	GALVANIZED STEEL BEAM (W8X21)	LF	25	RELOCATE EXISTING OVERHEAD SIGN	SF
			26	10' WHITE PAVEMENT MARKING PAINT LINES	LF

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

[Signature] 7/15/14
DIRECTOR OF PUBLIC WORKS DATE

[Signature] 7/16/14
CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 7/16/14
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

WR&A

STATE OF MARYLAND
WALTER P. MCDONNELL
PROFESSIONAL ENGINEER
LICENSE NO. 19165
EXPIRES 06/11/2015

DES: WR&A	
DRN: WR&A	
CHK: J.MOCNY	
DATE: 7/11/2014	

BY	NO.	REVISION	DATE

INDEX OF QUANTITIES

TAX MAP 36 BLOCK NO. 5 ELECTION DISTRICT 3/7 HOWARD COUNTY, MARYLAND

DWG. SN-11.01

SCALE NONE

SHEET 125 OF 138

SHEET NO.	SIGN NO.	REMARKS	CODE NUMBERS *																										
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
SN-2.02	214	R1-1 (24"x24") SQ. PERFORATED TUBULAR STEEL SP & AB		4					1																				
	215	COUNTY "HUMP" SIGN (30"x30"), W13-1 BLK/FY (18"x18") SQ.PER.TUB.STL.SP & AB		6.25					1																				
	216	W11-15 (36"x36"), W16-9p (24"x12") SQ.PER.TUB.STL.SP & AB		11					2																		6.25		
	217	COUNTY "HUMP" SIGN (30"x30"), W13-1 BLK/FY (18"x18") SQ.PER.TUB.STL.SP & AB		6.25					1																				
	218	W11-15(BLK/FYG)(36"x36"), W16-9p(BLK/FYG)(24"x12") SQ.PER.TUB.STL.SP & AB		11					2																			6.25	
	219	R1-6a(2) (42"x36") SQ. PERFORATED TUBULAR STEEL SP & AB		10.5					2																				
SN-2.03	301	R4-7 (24"x30"), OM1-3 (18"x18"), OM1-3 (18"x18") SQ.PER.TUB.STL.SP&AB		9.5					1																				
	302	R1-2 (36"x36"x36") SQ. PERFORATED TUBULAR STEEL SP & AB		3.9					1																				
	303	R6-4 (30"x24") SQ. PERFORATED TUBULAR STEEL SP & AB		5					1																				
	304	M3-2 (24"x12"), M1-5 (30"x24"), M6-2R (21"x15") SQ.PER.TUB.STL.SP & AB		9.1875					2																				
	305	W1-8R (18"x24") SQ. PERFORATED TUBULAR STEEL SP & AB		3					1																				
	306	W1-8R (18"x24") SQ. PERFORATED TUBULAR STEEL SP & AB		3					1																				
	308	R1-2 (36"x36"x36") SQ. PERFORATED TUBULAR STEEL SP & AB		3.9					1																				
	309	R6-4 (30"x24") SQ. PERFORATED TUBULAR STEEL SP & AB		5					1																				
	310	D-3(2)MOD (66"x24") SQ. PERFORATED TUBULAR STEEL SP & AB		11					2																				
	311	R6-4 (30"x24") SQ. PERFORATED TUBULAR STEEL SP & AB		5					1																				
	312	D-3(2)MOD (66"x36") SQ. PERFORATED TUBULAR STEEL SP & AB		16.5					2																				
	313	R1-2(36"x36"x36") SQ. PERFORATED TUBULAR STEEL SP & AB		3.9					1																				
	314	R4-7 (24"x30"), OM1-3 (18"x18"), OM1-3 (18"x18") SQ.PER.TUB.STL.SP&AB		9.5					1																				
	315	W3-2 (30"x30"), W13-1P (18"x18") SQ. PERFORATED TUBULAR STEEL SP & AB		8.5					1																				
	316	R2-1 (24"x30") SQ. PERFORATED TUBULAR STEEL SP & AB		5					1																				
	317	GM-2 (8'x6') 2 - (W6X9) GALVANIZED STEEL BEAMS	2.2		48						2	28																	
	318	R1-1 (30"x30"), R1-10P (24"x18") SQ. PERFORATED TUBULAR STEEL SP & AB		9.25					2																				
	319	OM4-3 (18"x18") SQ. PERFORATED TUBULAR STEEL SP & AB		2.25					1																				
320	OM4-3 (18"x18") SQ. PERFORATED TUBULAR STEEL SP & AB		2.25					1																					
321	OM4-3 (18"x18") SQ. PERFORATED TUBULAR STEEL SP & AB		2.25					1																					
322	W1-8L (18"x24"), W1-8R (18"x24") SQ. PERFORATED TUBULAR STEEL SP & AB		6					1																					
323	W1-8L (18"x24"), W1-8R (18"x24") SQ. PERFORATED TUBULAR STEEL SP & AB		6					1																					
324	W1-8L (18"x24"), W1-8R (18"x24") SQ. PERFORATED TUBULAR STEEL SP & AB		6					1																					
325	W1-1L (36"x36"), W13-1p (18"x18") SQ. PERFORATED TUBULAR STEEL SP & AB		11.25					2																					
326	W2-6 (30"x30") SQ. PERFORATED TUBULAR STEEL SP & AB		6.25					1																					
SN-2.04	401	M3-2 (30"x15"), M1-5 (48"x36"), R8-7(1) (24"x24") 2 - 4"x6"		19.125				38.5																					
	402	GM-3 (18'x7') 2 - (W8X21) GALVANIZED STEEL BEAMS ITEM NO. 7	2.8		126									35															
SN-2.05	501	R2-1 (36"x48") 2 - 4"x4"		12			34																						
	502	W11-3 (BLK/FYG) (36"x36"), W16-4(1) (BLK/FYG) (36"x18") 2 - 4"x4"		13.5			37																						
	503	W11-3 (BLK/FYG) (36"x36"), W16-4(1) (BLK/FYG) (36"x18") 2 - 4"x4"		13.5			37																						
	504	GM-4 (18'x7') 2 - (W8X21) GALVANIZED STEEL BEAMS	2.8		126						2			35															
	505	W13-2(1)R MOD (BLK/FY) (48"x72") 2 - 4"x6" ITEM NO. 7		24			38																						
SUBTOTALS FOR SN-11.02			7.8	284.5125	300	108	76.5	38	50	4	28	0	0	70	0	0	0	0	0	0	0	0	0	0	0	12.5	0		


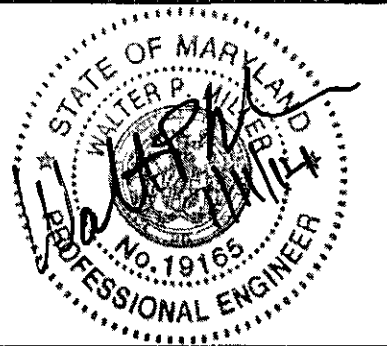
NOTE:

2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH" TYPE), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

DES: WR&A
DRN: WR&A
CHK: J.MOONY
DATE: 7/11/2014

* CODE NUMBER DESCRIPTION & UNIT					
CODE NUMBERS	DESCRIPTION	UNIT	CODE NUMBERS	DESCRIPTION	UNIT
1	CONCRETE FOR SIGN FOUNDATION	CY	13	5" WHITE PERM PREFORMED PATTERNED REFL PVMT MARKINGS	LF
2	SHEET ALUMINUM SIGNS	SF	14	5" YELLOW PERM PREFORMED PATTERNED REFL PVMT MARKINGS	LF
3	EXTRUDED ALUMINUM SIGNS	SF	15	10" WHITE PERM PREFORMED PATTERNED REFL PVMT MARKINGS	LF
4	WOOD SIGN SUPPORTS 4' x 4'	LF	16	5" WHITE PAVEMENT MARKING PAINT LINES	LF
5	WOOD SIGN SUPPORTS 4' x 6'	LF	17	12" WHITE PREFORMED THERMOPLASTIC PVMT MARKINGS	EA
6	SQUARE PERFORATED TUBULAR STEEL SIGN POST & ANCHOR BASE (SEE NOTE)	LF	18	24" WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PVMT MARKINGS	EA
			19	WHITE PREFORMED THERMOPLASTIC PVMT MARKING LEGENDS & SYMBOLS	SF
7	REMOVE EXISTING GROUND MOUNTED SIGNS & SUPPORTS	SF	20	5" YELLOW PAVEMENT MARKING PAINT LINES	LF
8	BREAKAWAY BASE SUPPORT SYSTEM FOR STEEL BEAMS	EA	21	WOOD SIGN SUPPORTS 6' x 8'	LF
9	GALVANIZED STEEL BEAM (W6X9)	LF	22	RELOCATE EXISTING GROUND MOUNTED SIGNS	SF
10	GALVANIZED STEEL BEAM (W6X12)	LF	23	10" YELLOW PAVEMENT MARKING PAINT LINES	LF
11	GALVANIZED STEEL BEAM (W6X16)	LF	24	INSTALL SHEET ALUMINUM SIGN	SF
12	GALVANIZED STEEL BEAM (W8X21)	LF	25	RELOCATE EXISTING OVERHEAD SIGN	SF
			26	10" WHITE PAVEMENT MARKING PAINT LINES	LF

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

DATE: 7/11/14

DATE: 7/11/14

INDEX OF QUANTITIES

TAX MAP 36 BLOCK NO. 5 ELECTION DISTRICT 3/7 HOWARD COUNTY, MARYLAND

DWG. SN-11.02
SCALE NONE
SHEET 126 OF 138

SHEET NO.	SIGN NO.	REMARKS	CODE NUMBERS *																									
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
SN-2.06	601	W2-6 (BLK/FY) (36"x36"), GM-9 (BLK/FY) (72"x30") 2 - 4"x6"		24			38																					
	602	GM-7 E5-1(9)MOD (W/G)&(BLK/FY)(7'x7') 2 - (W6x9) GALVANIZED STEEL BEAMS	2.2		49					2	32.5																	
	603	W1-8R (BLK/FY) (18"x24") 1 - 4"x4"		3		11.5																						
	604	W1-8R (BLK/FY) (18"x24") 1 - 4"x4"		3		11.5																						
	605	W1-8R (BLK/FY) (18"x24") 1 - 4"x4"		3		11.5																						
	606	W1-8R (BLK/FY) (18"x24") 1 - 4"x4"		3		11.5																						
	607	W4-1R (BLK/FY) (48"x48") 2 - 4"x6"		16			37																					
	608	R1-2 (48"x48"x48") 2 - 4"x4"		6.93		33																						
	609	W3-2 (BLK/FY)(36"x36"), W13-1P (BLK/FY)(24"x24") 2 - 4"x6"		13			38																					
		ITEM NO. 7							60																			
SN-2.07	701	GM-5 (11'x6') 2 - (W6x12) GALVANIZED STEEL BEAMS	2.2		66					2	28.5																	
	702	W11-3 (BLK/FY) (36"x36") 1 - 4"x6"		9			17																					
	703	W11-3 (BLK/FY) (36"x36"), W11-3 (BLK/FY) (36"x36") 1 - 4"x6"		18			17																					
	704	W11-3 (BLK/FY) (36"x36") 1 - 4"x6"		9			17																					
		ITEM NO. 7							47																			
SN-2.08	801	RELOCATE EXISTING: GM-6 (13'x6.5') 2 - (W6x16) GALVANIZED STEEL BEAMS	2.2							2		30														84.5		
	802	M3-4 (30"x15"), M1-5 (48"x36"), R8-7(1) (24"x24") 2 - 4"x6"		19.125			39																					
	803	GM-10 (12'x4') 2 - 6"x8"			48																				38			
SN-2.11	1101	RELOCATE EX. SIGNS (36"x36") & (48"x24") SQ.PER.TUB.STL.SP & AB									2															17		
	1102	W9-1(R) (BLK/FY) (36"x36"), W5-3(1) (BLK/FY) (30"x18") SQ.PER.TUB.STL.SP & AB		12.75				2																				
	1103	W9-2(4)(L) (BLK/FY) (30"x42") EXISTING SIGNAL MAST ARM		8.75																								
	1104	RELOCATE MAST ARM SIGN (96"x32") EXISTING SIGNAL MAST ARM																									22	
	1105	W4-2(R) (BLK/FY) (36"x36") SQ.PER.TUB.STL.SP & AB		9				1																				
	1106	GM-11 (30"x24") SQ.PER.TUB.STL.SP & AB		5				1																				
		ITEM NO. 7							5																			
PAVEMENT MARKINGS																												
SN-2.01														0	0	0	2230	227	144	37.5	2292					40		0
SN-2.02														0	0	0	2542	64	144	43	2075					0		0
SN-2.03														180	167	0	283	119	0	7.5	3071				10		0	
SN-2.04														0	0	0	0	0	0	0	0				0		0	
SN-2.05														752	601	103	0	0	0	0	0				0		0	
SN-2.06														2104	1813	1430	0	0	0	0	0				0		0	
SN-2.07														948	751	92	0	0	0	0	0				0		0	
SN-2.08														0	0	0	0	0	0	0	0				0		0	
SN-2.11														123	0	0	685	0	30	31	1128				0		55	
SUBTOTALS FOR SN-11.03			6.6	162.555	163	79	203	6	112	6	32.5	28.5	30	0	4107	3332	1625	5740	410	318	119	8566	38	101.5	50	0	22	55
TOTAL PROJECT QUANTITIES			17	790	535	187	321.5	87	270.5	12	60.5	28.5	30	108.5	4107	3332	1625	5740	410	318	119	8566	58.5	106.5	50	55	22	55
PROPOSED PROJECT QUANTITIES			17	830	535	200	340	95	285	12	61	29	30	109	4520	3675	1790	6315	460	355	130	9430	60	115	55	60	22	65

NOTE:

2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH" TYPE), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.

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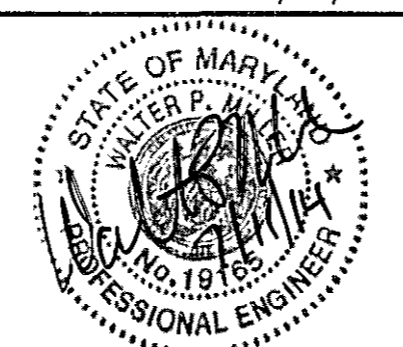
* CODE NUMBER DESCRIPTION & UNIT					
CODE NUMBERS	DESCRIPTION	UNIT	CODE NUMBERS	DESCRIPTION	UNIT
1	CONCRETE FOR SIGN FOUNDATION	CY	13	5" WHITE PERM PREFORMED PATTERNED REFL PVMT MARKINGS	LF
2	SHEET ALUMINUM SIGNS	SF	14	5" YELLOW PERM PREFORMED PATTERNED REFL PVMT MARKINGS	LF
3	EXTRUDED ALUMINUM SIGNS	SF	15	10" WHITE PERM PREFORMED PATTERNED REFL PVMT MARKINGS	LF
4	WOOD SIGN SUPPORTS 4' x 4'	LF	16	5" WHITE PAVEMENT MARKING PAINT LINES	LF
5	WOOD SIGN SUPPORTS 4' x 6'	LF	17	12" WHITE PREFORMED THERMOPLASTIC PVMT MARKINGS	EA
6	SQUARE PERFORATED TUBULAR STEEL SIGN POST & ANCHOR BASE (SEE NOTE)	LF	18	24" WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PVMT MARKINGS	EA
7	REMOVE EXISTING GROUND MOUNTED SIGNS & SUPPORTS	SF	19	WHITE PREFORMED THERMOPLASTIC PVMT MARKING LEGENDS & SYMBOLS	SF
8	BREAKAWAY BASE SUPPORT SYSTEM FOR STEEL BEAMS	EA	20	5" YELLOW PAVEMENT MARKING PAINT LINES	LF
9	GALVANIZED STEEL BEAM (W6X9)	LF	21	WOOD SIGN SUPPORTS 6' x 8'	LF
10	GALVANIZED STEEL BEAM (W6X12)	LF	22	RELOCATE EXISTING GROUND MOUNTED SIGNS	SF
11	GALVANIZED STEEL BEAM (W6X16)	LF	23	10" YELLOW PAVEMENT MARKING PAINT LINES	LF
12	GALVANIZED STEEL BEAM (W8X21)	LF	24	INSTALL SHEET ALUMINUM SIGN	SF
			25	RELOCATE EXISTING OVERHEAD SIGN	SF
			26	10" WHITE PAVEMENT MARKING PAINT LINES	LF

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

Director of Public Works: *Ray A. ...* 7/11/14
 Chief, Bureau of Highways: *Hulger ...* 7/11/14

Chief, Bureau of Engineering: *Thomas E. ...* 7/11/14
 Chief, Transportation and Special Projects Division: *Steve ...* 7/11/14

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

DES: WR&A					
DRN: WR&A					
CHK: J.MOCNY					
DATE: 7/11/2014	BY:	NO.:	REVISION:	DATE:	TAX MAP: 36

INDEX OF QUANTITIES	
BLOCK NO. 5	ELECTION DISTRICT 3/7

**BLANDAIR REGIONAL PARK
PHASE J - SOUTH**

CAPITAL PROJECT # J-4237

HOWARD COUNTY, MARYLAND

DWG. SN-11.03

SCALE NONE

SHEET 127 OF 138

POLE SCHEDULE - HOWARD COUNTY OWNED LIGHT POLES				
POLE NUMBER	DWG. NO.	TYPE OF POLE	STATION & OFFSET**	REMARKS
P-101	LT-02	30' BRONZE FIBERGLASS	STA. 1102+61.0, 22.0' RT.	EMBEDDED BRONZE
P-102	LT-02	30' BRONZE FIBERGLASS	STA. 12+50.0, 28.0' RT.	EMBEDDED BRONZE
P-103	LT-02	30' BRONZE FIBERGLASS	STA. 1103+77.0, 52.0' LT.	EMBEDDED BRONZE
P-104	LT-02	30' BRONZE FIBERGLASS	STA. 601+95.0, 28.0' RT.	EMBEDDED BRONZE
P-105	LT-02	30' BRONZE FIBERGLASS	STA. 10+73.0, 20.5' RT.	EMBEDDED BRONZE
P-106	LT-02	30' BRONZE FIBERGLASS	STA. 1201+10.0, 23.0' RT.	EMBEDDED BRONZE
P-107	LT-02	30' BRONZE FIBERGLASS	STA. 1204+65.0, 34.0' LT.	EMBEDDED BRONZE
P-108	LT-02	30' BRONZE FIBERGLASS	STA. 1208+16.0, 35.0' LT.	EMBEDDED BRONZE
P-109	LT-02	30' BRONZE FIBERGLASS	STA. 1209+76.0, 35.0' LT.	EMBEDDED BRONZE
P-110	LT-03	30' BRONZE FIBERGLASS	STA. 1211+29.0, 32.0' LT.	EMBEDDED BRONZE
P-111	LT-03	30' BRONZE FIBERGLASS	STA. 1212+95.0, 32.0' LT.	EMBEDDED BRONZE
P-112	LT-03	30' BRONZE FIBERGLASS	STA. 1214+43.5, 32.5' LT.	EMBEDDED BRONZE
P-113	LT-03	30' BRONZE FIBERGLASS	STA. 1215+81.0, 23.0' LT.	EMBEDDED BRONZE
P-114	LT-03	30' BRONZE FIBERGLASS	STA. 1217+30.0, 22.0' RT.	EMBEDDED BRONZE
P-115	LT-03	30' BRONZE FIBERGLASS	STA. 1218+88.0, 20.0' RT.	EMBEDDED BRONZE
P-116	LT-04	30' BRONZE FIBERGLASS	STA. 1223+35.0, 25.5' LT.	EMBEDDED BRONZE
P-117	LT-04	30' BRONZE FIBERGLASS	STA. 21+52.0, 28.0' RT.	EMBEDDED BRONZE
P-118	LT-04	30' BRONZE FIBERGLASS	STA. 412+42.0, 34.0' RT.	EMBEDDED BRONZE
P-119	LT-04	30' BRONZE FIBERGLASS	STA. 20+57.0, 24.0' RT.	EMBEDDED BRONZE
P-120	LT-04	30' BRONZE FIBERGLASS	STA. 1301+06.0, 28.0' RT.	EMBEDDED BRONZE
P-121	LT-04	30' BRONZE FIBERGLASS	STA. 1302+33.5, 22.0' LT.	EMBEDDED BRONZE
P-122	LT-04	30' BRONZE FIBERGLASS	STA. 1303+77.0, 22.0' RT.	EMBEDDED BRONZE
P-123	LT-03	30' BRONZE FIBERGLASS	STA. 1214+60.0, 31.0' RT.	EMBEDDED BRONZE
P-124	LT-03	30' BRONZE FIBERGLASS	STA. 1214+84.0, 132.0' LT.	EMBEDDED BRONZE
P-125	LT-03	30' BRONZE FIBERGLASS	STA. 1216+61.0, 123.6' LT.	EMBEDDED BRONZE

*LUMINAIRE TYPE: LED FIXTURE WILL BE DETERMINED AT A LATER DATE.
 **POLE LOCATIONS AND OFFSETS ARE APPROXIMATE - HOWARD COUNTY TRAFFIC AND BGE WILL DETERMINE EXACT POLE LOCATIONS IN THE FIELD
 ***BRONZE FIBERGLASS LIGHT POLES TO BE FURNISHED AND INSTALLED BY BGE
 ****ARM LENGTH WILL BE DETERMINED AT A LATER DATE.

POLE SCHEDULE - SHA OWNED LIGHT POLES							
POLE NUMBER	DWG. NO.	TYPE OF POLE	ARM LENGTH	LAMP WATTAGE (TYPE)*	TYPE OF BASE	STATION & OFFSET	REMARKS
P-01	LT-05	40' ROUND STEEL	20'	LED	BREAKAWAY	STA. 402+13.0, 32.0', RT	SHA STANDARD
P-02	LT-05	40' ROUND STEEL	20'	LED	BREAKAWAY	STA. 404+28.5, 32.0', RT	SHA STANDARD
P-03	LT-06	40' ROUND STEEL	20'	LED	BREAKAWAY	STA. 406+35.0, 32.0', RT	SHA STANDARD
P-04	LT-06	40' ROUND STEEL	20'	LED	BREAKAWAY	STA. 408+24.0, 35.0', RT	SHA STANDARD
P-05	LT-06	40' ROUND STEEL	20'	LED	BREAKAWAY	STA. 1038+45.0, 46.15', RT	SHA STANDARD
P-06	LT-06	40' ROUND STEEL	20'	LED	BREAKAWAY	STA. 410+93.0, 35.0', RT	SHA STANDARD
P-07	LT-06	40' ROUND STEEL	20'	LED	NON-BREAKAWAY	STA. 502+30.0, 35.0', RT	SHA STANDARD
P-08	---	---	---	---	---	---	POLE NUMBER NOT USED
P-09	LT-06	40' ROUND STEEL	20'	LED	BREAKAWAY	STA. 504+94.0, 35.0', RT	SHA STANDARD
P-10	LT-06	40' ROUND STEEL	20'	LED	BREAKAWAY	STA. 507+17.0, 34.1', RT	SHA STANDARD
P-11	LT-07	40' ROUND STEEL	20'	LED	BREAKAWAY	STA. 509+50.5, 32.0', RT	SHA STANDARD
P-12	LT-07	40' ROUND STEEL	20'	LED	BREAKAWAY	STA. 511+89.0, 32.0', RT	SHA STANDARD

*LUMINAIRE TYPE: LED ROADWAY



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WHITMAN, REQUARDT & ASSOCIATES, LLP
 801 South Caroline Street, Baltimore, Maryland 21231

SCHEDULE OF SHA PANEL

CIRCUIT NUMBER	EQUIPMENT SERVED	CONNECTED LOAD		PHASE AND VOLTS	BRANCH CIRCUIT BREAKERS			REMARKS
		KW	AMPS		NO. OF POLES	FRAME SIZE	TRIP SIZE	
1	POLE NOS. P-01, 3, 6, 9, 11	1.75	5.75	240	2	100	20A	5-280W LED
2	SPARE	---	---	240	---	100	---	EMPTY
3	POLE NOS. P-02, 4, 5, 7, 10, 12	2.1	6.9	240	2	100	20A	6-280W LED
4	SPARE	---	---	240	---	100	---	EMPTY
TOTAL CONNECTED LOADS		3.85	12.65					

*WATTAGES ARE ASSUMED BASED ON A 280W FIXTURE FOR LED ROADWAY LUMINAIRES

SHA GENERAL NOTES:

- ALL EXISTING LIGHTING SYSTEM UNDERGROUND ELECTRICAL LINES AND UTILITY LINES ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UNDERGROUND ELECTRICAL LINES AND UTILITIES PRIOR TO CONSTRUCTION. IF THE CONTRACTOR PERCEIVES THAT THERE IS A CONFLICT BETWEEN THE PROPOSED LIGHTING EQUIPMENT AND THE EXISTING UNDERGROUND ELECTRICAL LINES OR UTILITIES THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
- THE CENTER OF THE CABLE TRENCH SHALL BE 3 FEET BEHIND THE CENTER OF THE LIGHTING STRUCTURES UNLESS SHOWN IN THE PLANS, OR AS DIRECTED BY THE ENGINEER.
- THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IN CASE OF DAMAGE TO AN EXISTING FACILITY.
- THE CONTRACTOR SHALL REPLACE ALL CONCRETE GUTTERS, FLUMES, UNDERDRAINS AND OTHER CONCRETE STRUCTURES DAMAGED OR REMOVED DURING THE INSTALLATION OF FOUNDATIONS, CONDUIT, AND CABLE.
- LIGHTING STRUCTURES SHALL NOT BE PLACED ON THE ROADWAY SIDE OF EXISTING OR PROPOSED TRAFFIC BARRIER W-BEAM OR CONCRETE TRAFFIC BARRIER WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER.
- ALL CONNECTIONS BETWEEN GROUND RODS AND GROUND CABLE SHALL BE BY EXOTHERMIC WELD.
- CONDUCTORS SHALL NOT BE SPLICED EXCEPT IN STRUCTURES, MANHOLES AND PULL OR JUNCTION BOXES. ALL MANHOLES, CONDUITS UNDER PAVEMENT, LIGHTING STRUCTURES, ETC. SHALL BE STAKED OUT AND EVERY LOCATION APPROVED BY THE ENGINEER BEFORE ANY WORK IS DONE.
- ALL DRIVEN CONDUIT SHALL BE PLACED UNDER PAVEMENT BY DIRECTIONAL BORING OR JACKING.
- ALL LIGHTING STRUCTURES NOT PROTECTED BY TRAFFIC BARRIER SHALL BE ON BREAKAWAY BASES.
- FOR LOCATION OF PROPOSED SHA CONTROL CABINET, SEE DWG. NO. LT-06.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND.

La. J. Ke 2/13/14 *Thomas B. Butler* 2/11/14
 DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE
Harvey Seaman 7/11/14 *Steve Shaver* 7/11/14
 CHIEF, BUREAU OF HIGHWAYS DATE CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE

SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 OFFICE OF TRAFFIC & SAFETY
 TRAFFIC ENGINEERING DESIGN DIVISION
 BLANDAIR REGIONAL PARK
 PHASE J - SOUTH

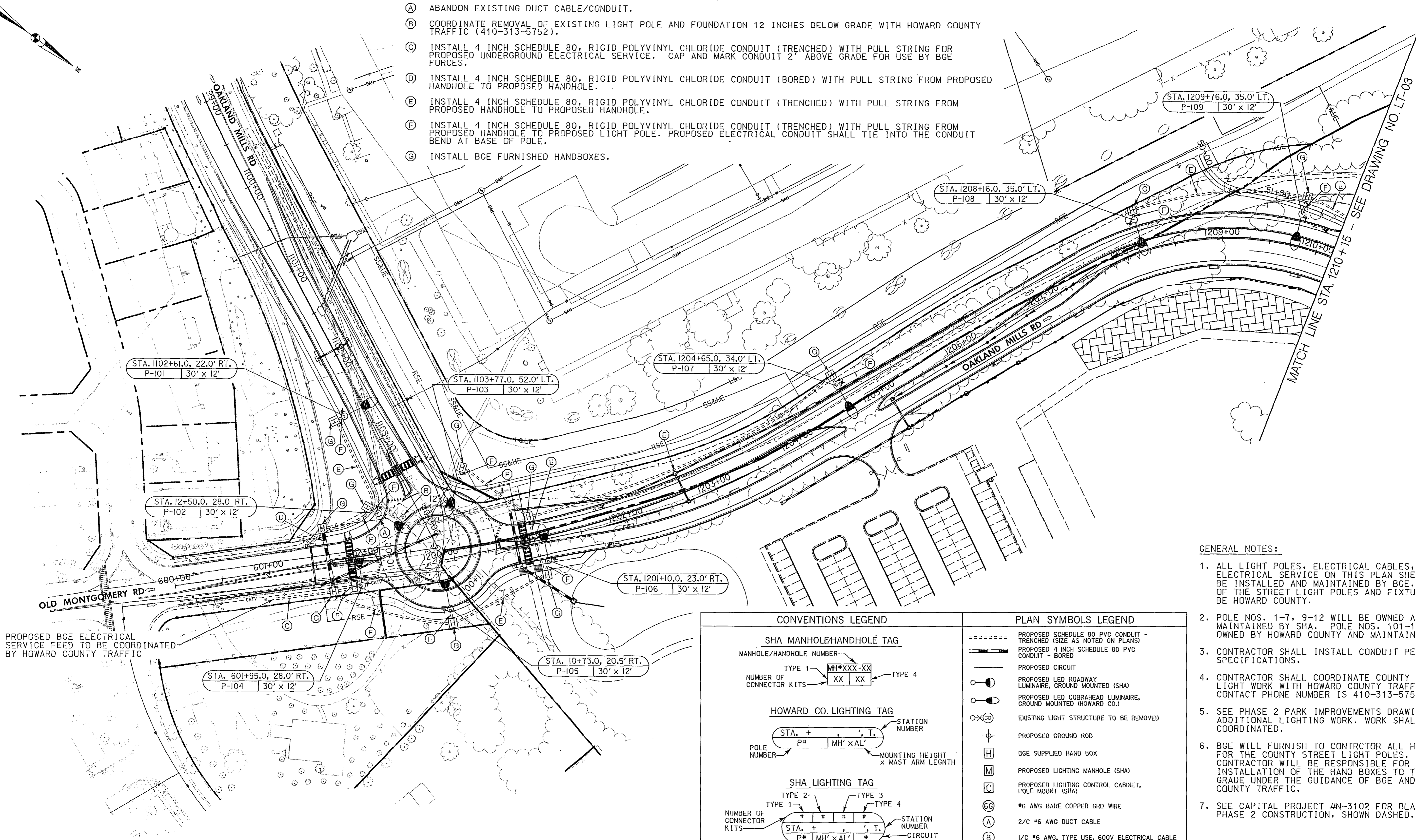
SHA APPROVALS ARE FOR LIGHTING DRAWINGS LT-05 THRU LT-07

APPROVALS	REVISIONS
TEAM LEADER	
ASST. DW. CHIEF	
DIVISION CHIEF	
OFFICE DIRECTOR	

LIGHTING NOTES & DETAILS	
SCALE NONE DATE 7/11/14 CONTRACT NO. J-4237	
DESIGNED BY J. RASMUSSEN COUNTY HOWARD COUNTY	
DRAWN BY J. RASMUSSEN LOGMILE 13017505.10 - 13017506.18	
CHECKED BY J. MOCNY TMS NO.	
F.A.P. NO. NA TOD NO.	
DRAWING NO. LT-01 OF 7 SHEET NO. 128 OF 138	

CONSTRUCTION DETAILS:

- (A) ABANDON EXISTING DUCT CABLE/CONDUIT.
- (B) COORDINATE REMOVAL OF EXISTING LIGHT POLE AND FOUNDATION 12 INCHES BELOW GRADE WITH HOWARD COUNTY TRAFFIC (410-313-5752).
- (C) INSTALL 4 INCH SCHEDULE 80, RIGID POLYVINYL CHLORIDE CONDUIT (TRENCHED) WITH PULL STRING FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE. CAP AND MARK CONDUIT 2' ABOVE GRADE FOR USE BY BGE FORCES.
- (D) INSTALL 4 INCH SCHEDULE 80, RIGID POLYVINYL CHLORIDE CONDUIT (BORED) WITH PULL STRING FROM PROPOSED HANDHOLE TO PROPOSED HANDHOLE.
- (E) INSTALL 4 INCH SCHEDULE 80, RIGID POLYVINYL CHLORIDE CONDUIT (TRENCHED) WITH PULL STRING FROM PROPOSED HANDHOLE TO PROPOSED HANDHOLE.
- (F) INSTALL 4 INCH SCHEDULE 80, RIGID POLYVINYL CHLORIDE CONDUIT (TRENCHED) WITH PULL STRING FROM PROPOSED HANDHOLE TO PROPOSED LIGHT POLE. PROPOSED ELECTRICAL CONDUIT SHALL TIE INTO THE CONDUIT BEND AT BASE OF POLE.
- (G) INSTALL BGE FURNISHED HANDBOXES.



PROPOSED BGE ELECTRICAL SERVICE FEED TO BE COORDINATED BY HOWARD COUNTY TRAFFIC

- GENERAL NOTES:**
- ALL LIGHT POLES, ELECTRICAL CABLES, AND ELECTRICAL SERVICE ON THIS PLAN SHEET ARE TO BE INSTALLED AND MAINTAINED BY BGE. OWNERSHIP OF THE STREET LIGHT POLES AND FIXTURES SHALL BE HOWARD COUNTY.
 - POLE NOS. 1-7, 9-12 WILL BE OWNED AND MAINTAINED BY SHA. POLE NOS. 101-125 WILL BE OWNED BY HOWARD COUNTY AND MAINTAINED BY BGE.
 - CONTRACTOR SHALL INSTALL CONDUIT PER BGE SPECIFICATIONS.
 - CONTRACTOR SHALL COORDINATE COUNTY STREET LIGHT WORK WITH HOWARD COUNTY TRAFFIC. CONTACT PHONE NUMBER IS 410-313-5752.
 - SEE PHASE 2 PARK IMPROVEMENTS DRAWINGS FOR ADDITIONAL LIGHTING WORK. WORK SHALL BE COORDINATED.
 - BGE WILL FURNISH TO CONTRACTOR ALL HAND BOXES FOR THE COUNTY STREET LIGHT POLES. THE CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLATION OF THE HAND BOXES TO THE PROPER GRADE UNDER THE GUIDANCE OF BGE AND HOWARD COUNTY TRAFFIC.
 - SEE CAPITAL PROJECT #N-3102 FOR BLANDAIR PARK PHASE 2 CONSTRUCTION, SHOWN DASHED.

CONVENTIONS LEGEND	PLAN SYMBOLS LEGEND
<p>SHA MANHOLE/HANDHOLE TAG</p> <p>MANHOLE/HANDHOLE NUMBER</p> <p>TYPE 1: MH*XXX-XX</p> <p>NUMBER OF CONNECTOR KITS: XX XX</p> <p>TYPE 4</p> <p>HOWARD CO. LIGHTING TAG</p> <p>STA. + , T.</p> <p>POLE NUMBER: P#</p> <p>MOUNTING HEIGHT x MAST ARM LENGTH: MH' x AL'</p> <p>SHA LIGHTING TAG</p> <p>TYPE 1, TYPE 2, TYPE 3, TYPE 4</p> <p>NUMBER OF CONNECTOR KITS: # # # #</p> <p>POLE NUMBER: P#</p> <p>STATION NUMBER: STA. + , T.</p> <p>CIRCUIT NUMBER: #</p> <p>MOUNTING HEIGHT x MAST ARM LENGTH: MH' x AL'</p>	<p>===== PROPOSED SCHEDULE 80 PVC CONDUIT - TRENCHED (SIZE AS NOTED ON PLANS)</p> <p>----- PROPOSED 4 INCH SCHEDULE 80 PVC CONDUIT - BORED</p> <p>--- PROPOSED CIRCUIT</p> <p>○ PROPOSED LED ROADWAY LUMINAIRE, GROUND MOUNTED (SHA)</p> <p>○ PROPOSED LED COBRAHEAD LUMINAIRE, GROUND MOUNTED (HOWARD CO.)</p> <p>⊗ PROPOSED EXISTING LIGHT STRUCTURE TO BE REMOVED</p> <p>⊕ PROPOSED GROUND ROD</p> <p>⊠ BGE SUPPLIED HAND BOX</p> <p>Ⓜ PROPOSED LIGHTING MANHOLE (SHA)</p> <p>ⓐ PROPOSED LIGHTING CONTROL CABINET, POLE MOUNT (SHA)</p> <p>ⓐ #6 AWG BARE COPPER GRD WIRE</p> <p>ⓐ 2/C #6 AWG DUCT CABLE</p> <p>ⓐ 1/C #6 AWG, TYPE USE, 600V ELECTRICAL CABLE</p> <p>ⓐ PROPOSED METERED SERVICE PEDESTAL</p> <p>→ DIRECTION OF CIRCUIT RUN BACK TO CABINET</p>

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

[Signature] DATE: 7/11/14
DIRECTOR OF PUBLIC WORKS

[Signature] DATE: 7/11/14
CHIEF, BUREAU OF ENGINEERING

[Signature] DATE: 7/11/14
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

WR&A



DES:	JHR
DRN:	JHR
CHK:	JMM
DATE:	7/11/2014
BY:	NO.
REVISION:	
DATE:	

LIGHTING PLAN

**BLANDAIR REGIONAL PARK
PHASE J - SOUTH**

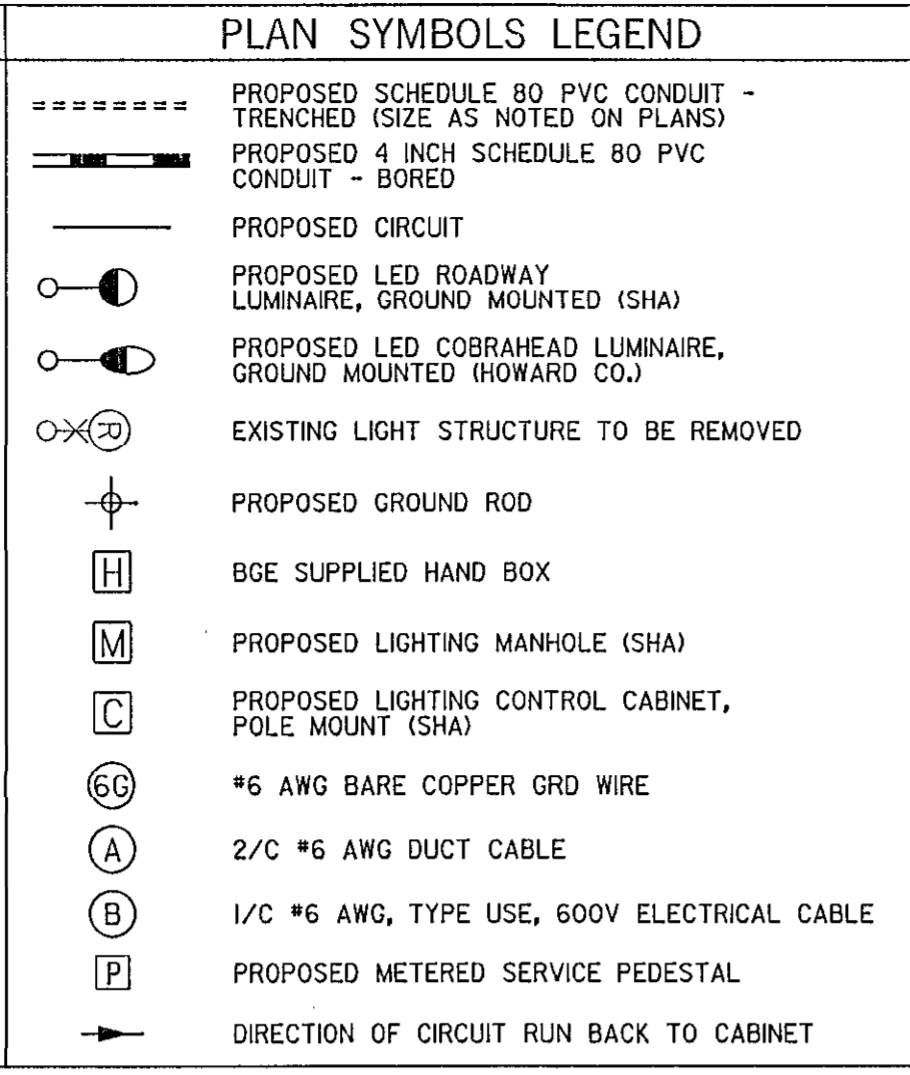
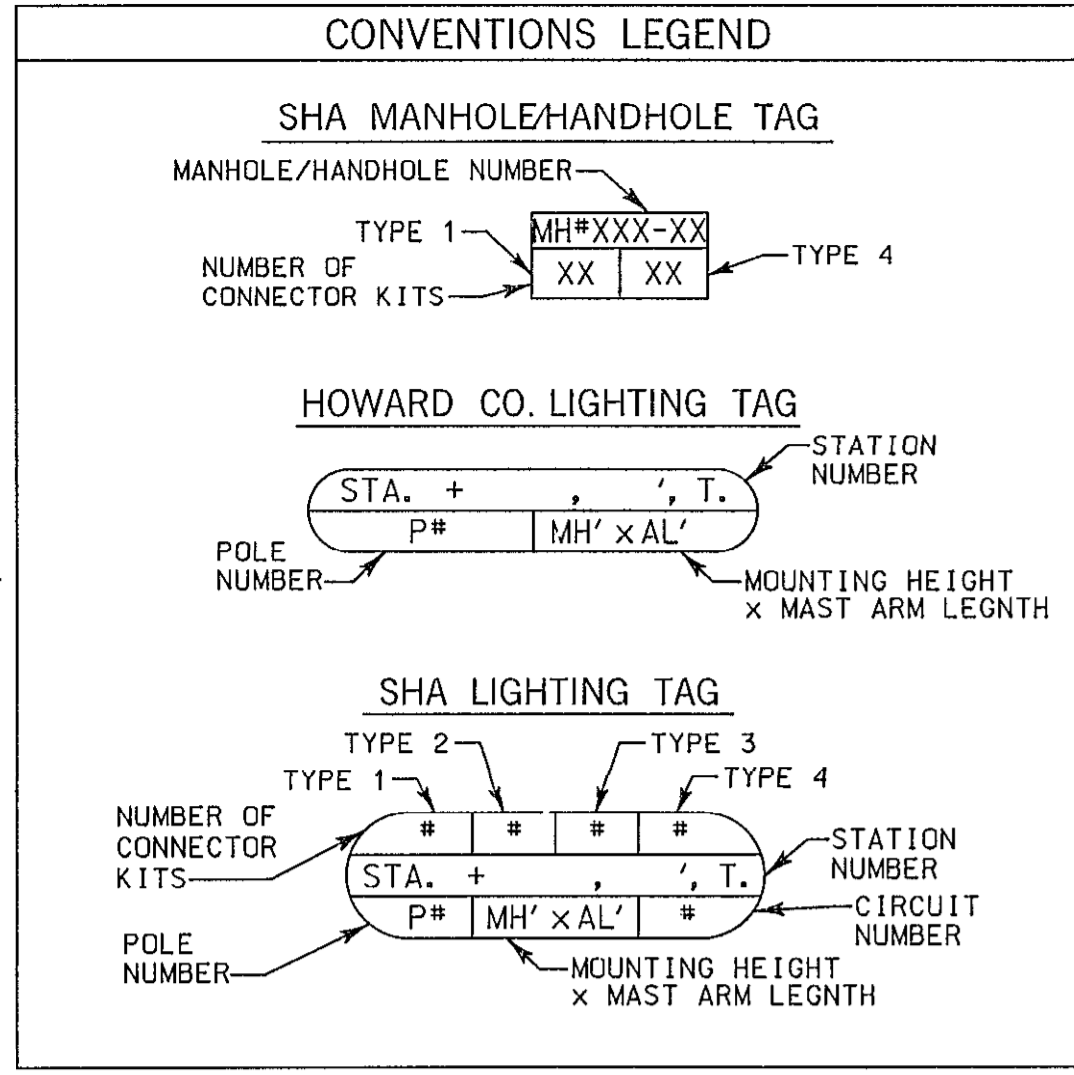
CAPITAL PROJECT # J-4237

ELECTION DISTRICT 3/7 HOWARD COUNTY, MARYLAND

DWG. **LT-02**

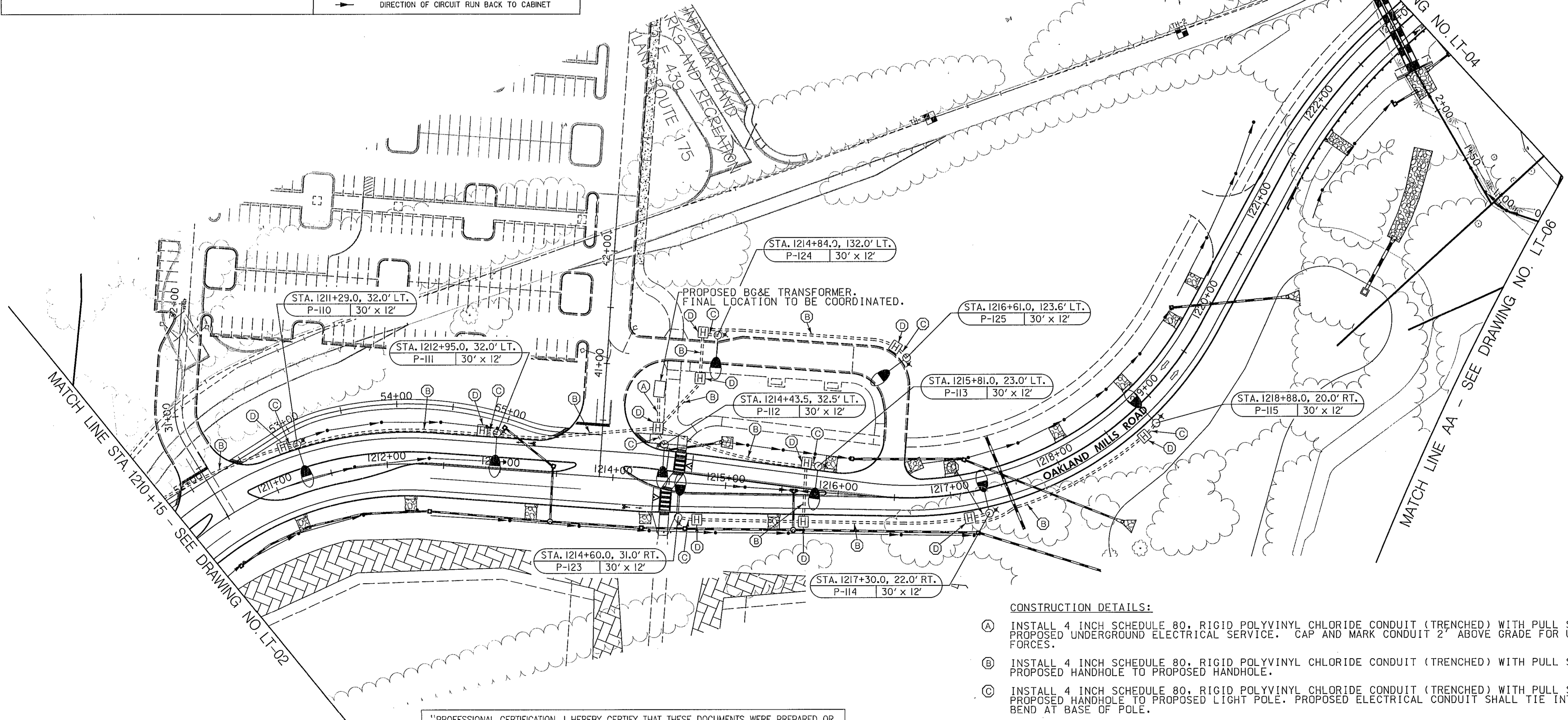
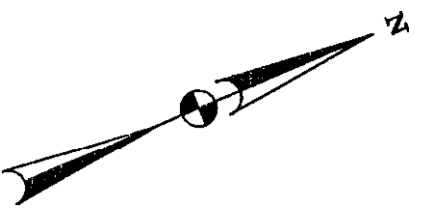
SCALE: 1" = 50'

SHEET **129** OF **138**



GENERAL NOTES:

- ALL LIGHT POLES, ELECTRICAL CABLES, AND ELECTRICAL SERVICE ON THIS PLAN SHEET ARE TO BE INSTALLED AND MAINTAINED BY BGE. OWNERSHIP OF THE STREET LIGHT POLES AND FIXTURES SHALL BE HOWARD COUNTY.
- POLE NOS. 1-7, 9-12 WILL BE OWNED AND MAINTAINED BY SHA. POLE NOS. 101-125 WILL BE OWNED BY HOWARD COUNTY AND MAINTAINED BY BGE.
- CONTRACTOR SHALL INSTALL CONDUIT PER BGE SPECIFICATIONS.
- CONTRACTOR SHALL COORDINATE COUNTY STREET LIGHT WORK WITH HOWARD COUNTY TRAFFIC. CONTACT PHONE NUMBER IS 410-313-5752.
- SEE CAPITAL PROJECT #N-3102 FOR BLANDAIR PARK PHASE 2 CONSTRUCTION, SHOWN DASHED.
- BGE WILL FURNISH TO CONTRACTOR ALL HAND BOXES FOR THE COUNTY STREET LIGHT POLES. THE CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLATION OF THE HAND BOXES TO THE PROPER GRADE UNDER THE GUIDANCE OF BGE AND HOWARD COUNTY TRAFFIC.
- PROPOSED HANDBOXES FOR PROPOSED LIGHTS P-110, P-111, P-113, P-114, AND P-115 SHALL BE INSTALLED WITHIN 4' OF THE PROPOSED FACE OF CURB TO AVOID ANY IMPACTS WITH THE PROPOSED DITCH.



- CONSTRUCTION DETAILS:**
- (A) INSTALL 4 INCH SCHEDULE 80, RIGID POLYVINYL CHLORIDE CONDUIT (TRENCHED) WITH PULL STRING FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE. CAP AND MARK CONDUIT 2' ABOVE GRADE FOR USE BY BGE & FORCES.
 - (B) INSTALL 4 INCH SCHEDULE 80, RIGID POLYVINYL CHLORIDE CONDUIT (TRENCHED) WITH PULL STRING FROM PROPOSED HANDHOLE TO PROPOSED HANDHOLE.
 - (C) INSTALL 4 INCH SCHEDULE 80, RIGID POLYVINYL CHLORIDE CONDUIT (TRENCHED) WITH PULL STRING FROM PROPOSED HANDHOLE TO PROPOSED LIGHT POLE. PROPOSED ELECTRICAL CONDUIT SHALL TIE INTO THE CONDUIT BEND AT BASE OF POLE.
 - (D) INSTALL BGE FURNISHED HANDBOXES.

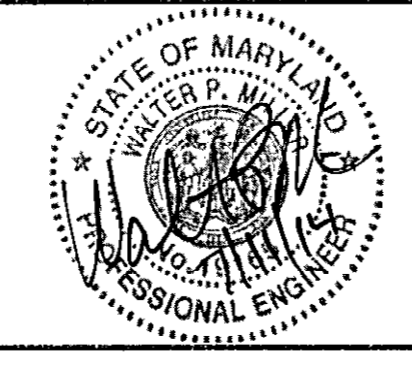
"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

Director of Public Works: [Signature] 7/15/14
Chief, Bureau of Engineering: [Signature] 7/11/14
Chief, Transportation and Special Projects Division: [Signature] 7/11/14

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

WR&A



DES:	JHR				
DRN:	JHR				
CHK:	JMM				
DATE:	7/11/2014	BY:		NO.:	
REVISION:		DATE:		TAX MAP:	36
		BLOCK NO.:	5	ELECTION DISTRICT:	3/7

LIGHTING PLAN

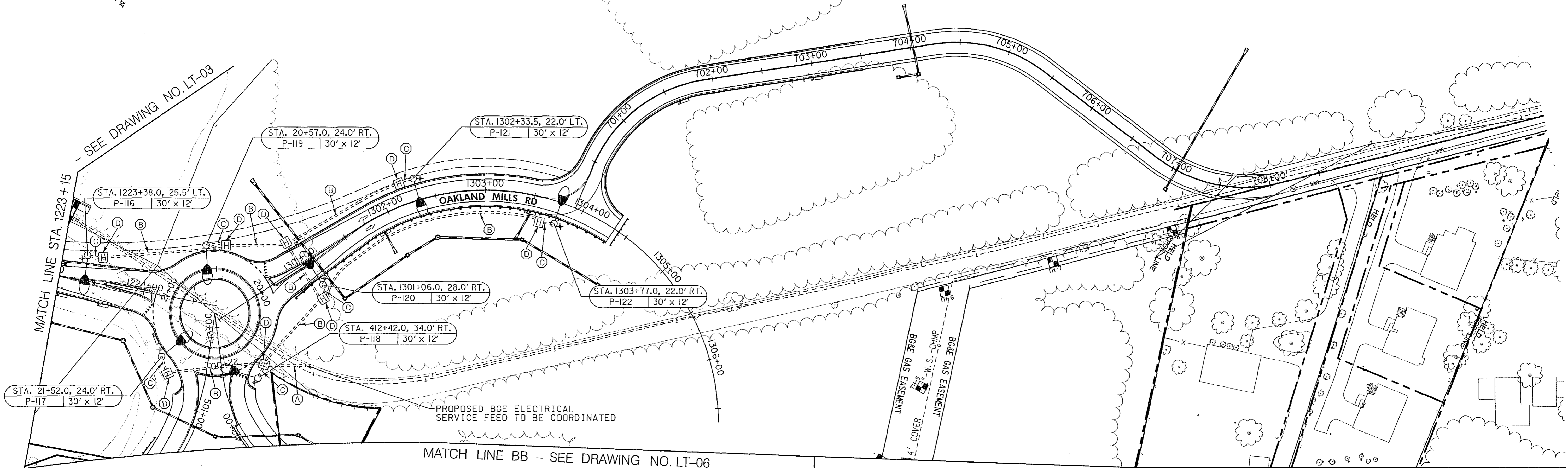
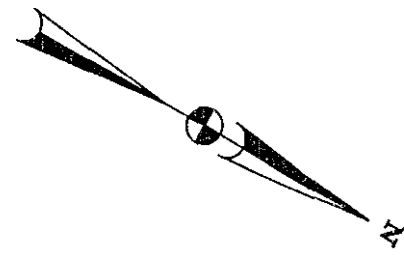
**BLANDAIR REGIONAL PARK
PHASE J - SOUTH**

CAPITAL PROJECT # J-4237

DWG. **LT-03**

SCALE: 1" = 50'

SHEET **130** OF **138**



MATCH LINE BB - SEE DRAWING NO. LT-06

MATCH LINE CC - SEE DRAWING NO. LT-05

CONVENTIONS LEGEND	PLAN SYMBOLS LEGEND
<p>SHA MANHOLE/HANDHOLE TAG</p> <p>MANHOLE/HANDHOLE NUMBER</p> <p>TYPE 1: MH#XXX-XX</p> <p>TYPE 4: XX XX</p> <p>NUMBER OF CONNECTOR KITS</p>	<p>===== PROPOSED SCHEDULE 80 PVC CONDUIT - TRENCHED (SIZE AS NOTED ON PLANS)</p> <p>----- PROPOSED 4 INCH SCHEDULE 80 PVC CONDUIT - BORED</p> <p>----- PROPOSED CIRCUIT</p> <p>○ PROPOSED LED ROADWAY LUMINAIRE, GROUND MOUNTED (SHA)</p> <p>○ PROPOSED LED COBRAHEAD LUMINAIRE, GROUND MOUNTED (HOWARD CO.)</p> <p>○ X (20) EXISTING LIGHT STRUCTURE TO BE REMOVED</p> <p>⊕ PROPOSED GROUND ROD</p> <p>[H] BGE SUPPLIED HAND BOX</p> <p>[M] PROPOSED LIGHTING MANHOLE (SHA)</p> <p>[C] PROPOSED LIGHTING CONTROL CABINET, POLE MOUNT (SHA)</p> <p>Ⓞ #6 #6 AWG BARE COPPER GRD WIRE</p> <p>ⓐ 2/C #6 AWG DUCT CABLE</p> <p>ⓑ 1/C #6 AWG, TYPE USE, 600V ELECTRICAL CABLE</p> <p>[P] PROPOSED METERED SERVICE PEDESTAL</p> <p>➔ DIRECTION OF CIRCUIT RUN BACK TO CABINET</p>
<p>HOWARD CO. LIGHTING TAG</p> <p>STATION NUMBER</p> <p>POLE NUMBER</p> <p>MOUNTING HEIGHT x MAST ARM LEGNTH</p>	
<p>SHA LIGHTING TAG</p> <p>TYPE 1, TYPE 2, TYPE 3, TYPE 4</p> <p>NUMBER OF CONNECTOR KITS</p> <p>POLE NUMBER</p> <p>STATION NUMBER</p> <p>CIRCUIT NUMBER</p> <p>MOUNTING HEIGHT x MAST ARM LEGNTH</p>	

GENERAL NOTES:

- ALL LIGHT POLES, ELECTRICAL CABLES, AND ELECTRICAL SERVICE ON THIS PLAN SHEET ARE TO BE INSTALLED AND MAINTAINED BY BGE. OWNERSHIP OF THE STREET LIGHT POLES AND FIXTURES SHALL BE HOWARD COUNTY.
- POLE NOS. 1-7, 9-12 WILL BE OWNED AND MAINTAINED BY SHA. POLE NOS. 101-125 WILL BE OWNED BY HOWARD COUNTY AND MAINTAINED BY BGE.
- CONTRACTOR SHALL INSTALL CONDUIT PER BGE SPECIFICATIONS.
- CONTRACTOR SHALL COORDINATE COUNTY STREET LIGHT WORK WITH HOWARD COUNTY TRAFFIC. CONTACT PHONE NUMBER IS 410-313-5752.
- BGE WILL FURNISH TO CONTRACTOR ALL HAND BOXES FOR THE COUNTY STREET LIGHT POLES. THE CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLATION OF THE HAND BOXES TO THE PROPER GRADE UNDER THE GUIDANCE OF BGE AND HOWARD COUNTY TRAFFIC.

CONSTRUCTION DETAILS:

- INSTALL 4 INCH SCHEDULE 80, RIGID POLYVINYL CHLORIDE CONDUIT (TRENCHED) WITH PULL STRING FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE. CAP AND MARK CONDUIT 2' ABOVE GRADE FOR USE BY BGE FORCES.
- INSTALL 4 INCH SCHEDULE 80, RIGID POLYVINYL CHLORIDE CONDUIT (TRENCHED) WITH PULL STRING FROM PROPOSED HANDHOLE TO PROPOSED HANDHOLE.
- INSTALL 4 INCH SCHEDULE 80, RIGID POLYVINYL CHLORIDE CONDUIT (TRENCHED) WITH PULL STRING FROM PROPOSED HANDHOLE TO PROPOSED LIGHT POLE. PROPOSED ELECTRICAL CONDUIT SHALL TIE INTO THE CONDUIT BEND AT BASE OF POLE.
- INSTALL BGE FURNISHED HANDBOXES.

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."

DWG. **LT-04**

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

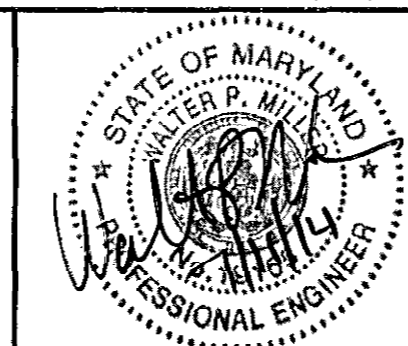
[Signature] 7/8/14
DIRECTOR OF PUBLIC WORKS DATE

[Signature] 7/11/14
CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 7/11/14
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

WR&A



DES: JHR				
DRN: JHR				
CHK: JMM				
DATE: 7/1/2014	BY:	NO.:	REVISION:	DATE:

LIGHTING PLAN

TAX MAP 36 BLOCK NO. 5

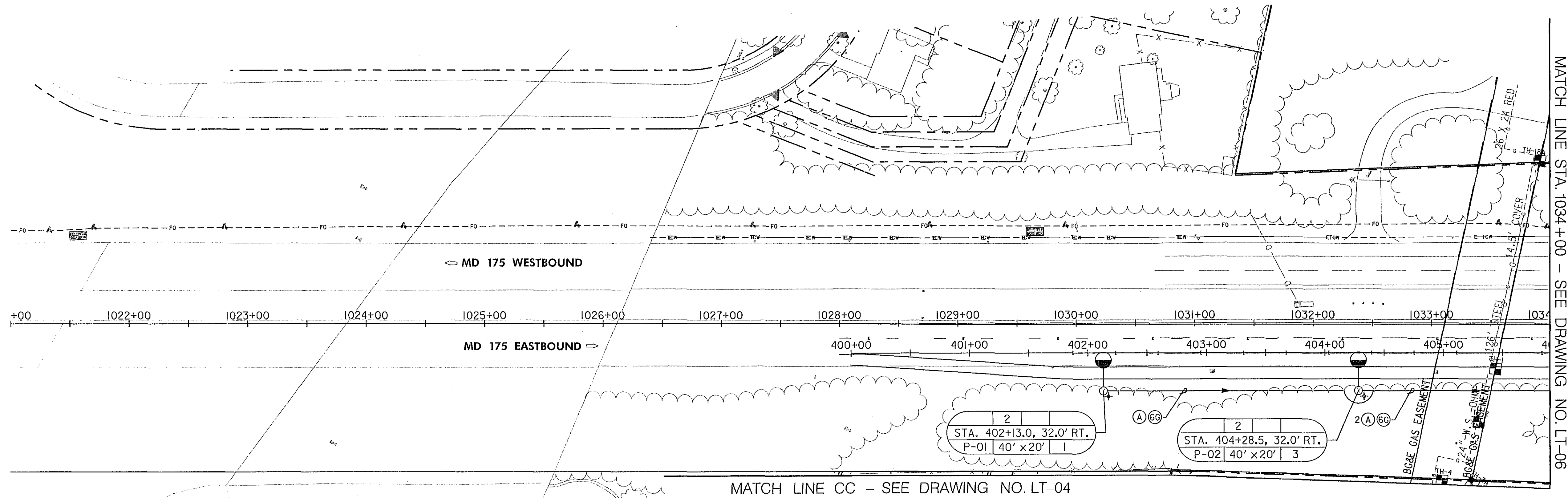
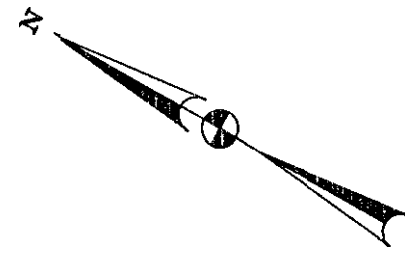
**BLANDAIR REGIONAL PARK
PHASE J - SOUTH**

CAPITAL PROJECT # J-4237

ELECTION DISTRICT 3/7 HOWARD COUNTY, MARYLAND

SCALE
1" = 50'

SHEET
131 OF 138



GENERAL NOTES:

1. ALL LIGHT POLES, FOUNDATIONS, MANHOLES, CABINET, ELECTRICAL CABLES, AND ELECTRICAL SERVICE UTILITY EQUIPMENT ON THIS PLAN SHEET ARE TO BE INSTALLED BY THE CONTRACTOR AND OWNED AND MAINTAINED BY SHA.
2. POLE NOS. 1-7, 9-12 WILL BE OWNED AND MAINTAINED BY SHA. POLE NOS. 101-125 WILL BE OWNED BY HOWARD COUNTY AND MAINTAINED BY BGE.



"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."



WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, Maryland 21231

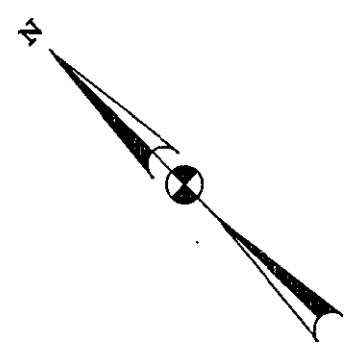
CONVENTIONS LEGEND	PLAN SYMBOLS LEGEND
<p>SHA MANHOLE/HANDHOLE TAG</p> <p>MANHOLE/HANDHOLE NUMBER</p> <p>TYPE 1: MH#XXX-XX NUMBER OF CONNECTOR KITS: XX XX</p> <p>TYPE 4: MH#XXX-XX</p> <p>HOWARD CO. LIGHTING TAG</p> <p>STATION NUMBER: STA. + . ' T. POLE NUMBER: P# MH' x AL' MOUNTING HEIGHT x MAST ARM LEGNTH</p> <p>SHA LIGHTING TAG</p> <p>TYPE 1: STA. + . ' T. P# MH' x AL' # # # # # # NUMBER OF CONNECTOR KITS: # # # # # # POLE NUMBER: P# MH' x AL' MOUNTING HEIGHT x MAST ARM LEGNTH</p>	<p>===== PROPOSED SCHEDULE 80 PVC CONDUIT - TRENCHED (SIZE AS NOTED ON PLANS)</p> <p>--- PROPOSED 4 INCH SCHEDULE 80 PVC CONDUIT - BORED</p> <p>— PROPOSED CIRCUIT</p> <p>○ PROPOSED LED ROADWAY LUMINAIRE, GROUND MOUNTED (SHA)</p> <p>○ PROPOSED LED COBRAHEAD LUMINAIRE, GROUND MOUNTED (HOWARD CO.)</p> <p>○(X) EXISTING LIGHT STRUCTURE TO BE REMOVED</p> <p>⊕ PROPOSED GROUND ROD</p> <p>H BGE SUPPLIED HAND BOX</p> <p>M PROPOSED LIGHTING MANHOLE (SHA)</p> <p>C PROPOSED LIGHTING CONTROL CABINET, POLE MOUNT (SHA)</p> <p>Ⓞ #6 AWG BARE COPPER GRD WIRE</p> <p>ⓐ 2/C #6 AWG DUCT CABLE</p> <p>ⓑ 1/C #6 AWG, TYPE USE, 600V ELECTRICAL CABLE</p> <p>P PROPOSED METERED SERVICE PEDESTAL</p> <p>→ DIRECTION OF CIRCUIT RUN BACK TO CABINET</p>

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND.	
<i>J. P. Russo</i> DIRECTOR OF PUBLIC WORKS CHIEF, BUREAU OF HIGHWAYS	<i>Thomas E. Butler</i> CHIEF, BUREAU OF ENGINEERING CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION
DATE: 7-11-14	DATE: 7/11/14

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
BLANDAIR REGIONAL PARK
PHASE J-- SOUTH

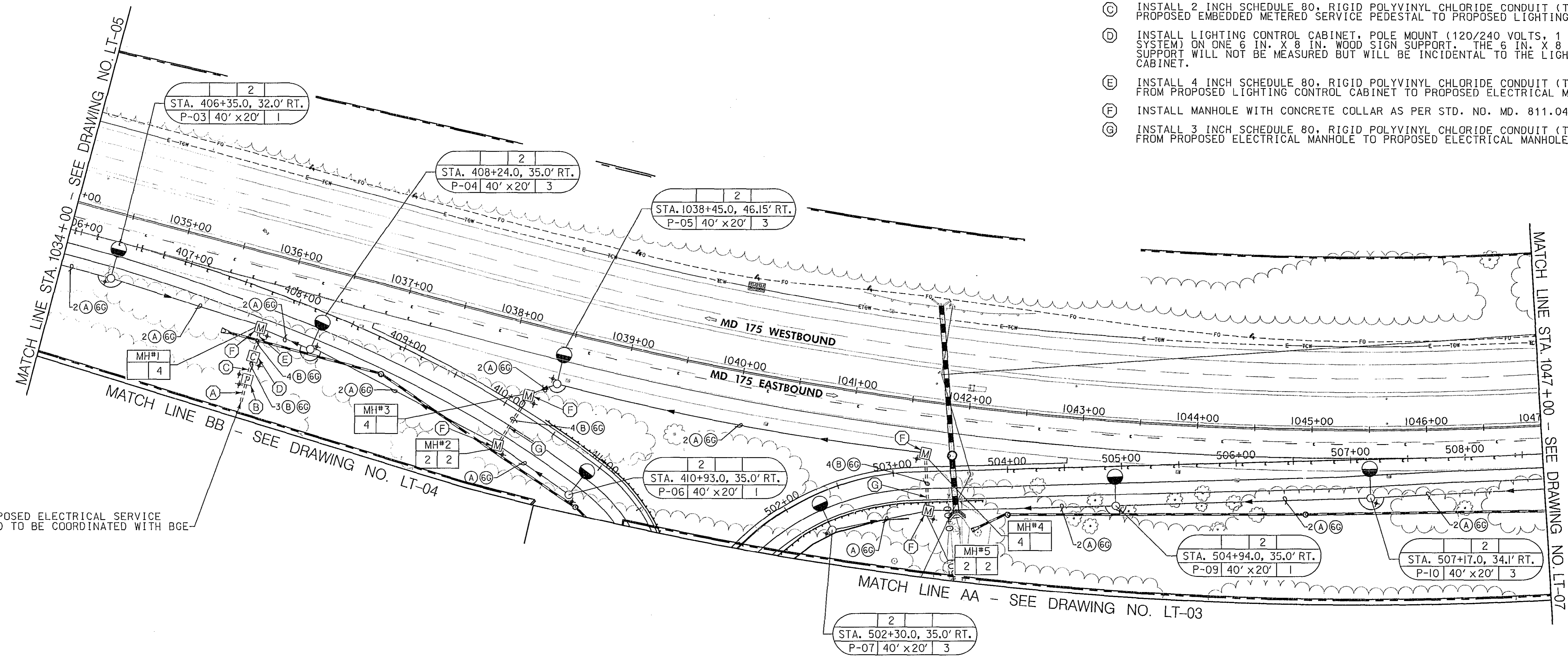
REVISIONS	LIGHTING PLAN	
	SCALE: 1" = 50'	DATE: 7/11/2014 CONTRACT NO. J-4237
	DESIGNED BY: J. RASMUSSEN	COUNTY: HOWARD COUNTY
	DRAWN BY: J. RASMUSSEN	LOGMILE: 13017505.10 - 13017506.18
	CHECKED BY: J. MOCNY	TIMS NO.:
	F.A.P. NO. N/A	TOD NO.:
	DRAWING NO. LT-05 OF 7	SHEET NO. 132 OF 138

PLOTTED: July 08, 2014
FILE: N:\120308-00\CADD\pl.LT-P005_BPU.dgn



CONSTRUCTION DETAILS:

- (A) INSTALL 4 IN. SCHEDULE 80, PVC ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE. CAP AND MARK CONDUIT 2 FT. ABOVE GRADE AT UTILITY POLE FOR USE BY BG&E FORCES.
- (B) INSTALL EMBEDDED METERED SERVICE PEDESTAL WITH 2-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE PVC CONDUIT BENDS IN PEDESTAL BASE.
- (C) INSTALL 2 INCH SCHEDULE 80, RIGID POLYVINYL CHLORIDE CONDUIT (TRENCHED) FROM PROPOSED EMBEDDED METERED SERVICE PEDESTAL TO PROPOSED LIGHTING CONTROL CABINET.
- (D) INSTALL LIGHTING CONTROL CABINET, POLE MOUNT (120/240 VOLTS, 1 PHASE, 3 WIRE SYSTEM) ON ONE 6 IN. X 8 IN. WOOD SIGN SUPPORT. THE 6 IN. X 8 IN. WOOD SIGN SUPPORT WILL NOT BE MEASURED BUT WILL BE INCIDENTAL TO THE LIGHTING CONTROL CABINET.
- (E) INSTALL 4 INCH SCHEDULE 80, RIGID POLYVINYL CHLORIDE CONDUIT (TRENCHED) FROM PROPOSED LIGHTING CONTROL CABINET TO PROPOSED ELECTRICAL MANHOLE.
- (F) INSTALL MANHOLE WITH CONCRETE COLLAR AS PER STD. NO. MD. 811.04.
- (G) INSTALL 3 INCH SCHEDULE 80, RIGID POLYVINYL CHLORIDE CONDUIT (TRENCHED) FROM PROPOSED ELECTRICAL MANHOLE TO PROPOSED ELECTRICAL MANHOLE.



PROPOSED ELECTRICAL SERVICE FEED TO BE COORDINATED WITH BGE

CONVENTIONS LEGEND	PLAN SYMBOLS LEGEND
<p>SHA MANHOLE/HANDHOLE TAG</p> <p>MANHOLE/HANDHOLE NUMBER</p> <p>TYPE 1: MH*XXX-XX</p> <p>NUMBER OF CONNECTOR KITS: XX XX</p> <p>TYPE 4</p> <p>HOWARD CO. LIGHTING TAG</p> <p>STATION NUMBER: STA. + . . . T.</p> <p>POLE NUMBER: P#</p> <p>MOUNTING HEIGHT X MAST ARM LENGTH: MH' x AL'</p> <p>SHA LIGHTING TAG</p> <p>TYPE 1, TYPE 2, TYPE 3, TYPE 4</p> <p>NUMBER OF CONNECTOR KITS: # # # #</p> <p>STATION NUMBER: STA. + . . . T.</p> <p>POLE NUMBER: P#</p> <p>MOUNTING HEIGHT X MAST ARM LENGTH: MH' x AL'</p> <p>CIRCUIT NUMBER: #</p>	<p>----- PROPOSED SCHEDULE 80 PVC CONDUIT - TRENCHED (SIZE AS NOTED ON PLANS)</p> <p>----- PROPOSED 4 INCH SCHEDULE 80 PVC CONDUIT - BORED</p> <p>----- PROPOSED CIRCUIT</p> <p>○ PROPOSED LED ROADWAY LUMINAIRE, GROUND MOUNTED (SHA)</p> <p>○ PROPOSED LED COBRAHEAD LUMINAIRE, GROUND MOUNTED (HOWARD CO.)</p> <p>○ EXISTING LIGHT STRUCTURE TO BE REMOVED</p> <p>⊕ PROPOSED GROUND ROD</p> <p>H BGE SUPPLIED HAND BOX</p> <p>M PROPOSED LIGHTING MANHOLE (SHA)</p> <p>C PROPOSED LIGHTING CONTROL CABINET, POLE MOUNT (SHA)</p> <p>⊙ #6 AWG BARE COPPER GRD WIRE</p> <p>⊙ 2/C #6 AWG DUCT CABLE</p> <p>⊙ 1/C #6 AWG, TYPE USE, 600V ELECTRICAL CABLE</p> <p>P PROPOSED METERED SERVICE PEDESTAL</p> <p>→ DIRECTION OF CIRCUIT RUN BACK TO CABINET</p>

GENERAL NOTES:

- ALL LIGHT POLES, FOUNDATIONS, MANHOLES, CABINET, ELECTRICAL CABLES, AND ELECTRICAL SERVICE UTILITY EQUIPMENT ON THIS PLAN SHEET ARE TO BE INSTALLED BY THE CONTRACTOR AND OWNED AND MAINTAINED BY SHA.
- POLE NOS. 1-7, 9-12 WILL BE OWNED AND MAINTAINED BY SHA. POLE NOS. 101-125 WILL BE OWNED BY HOWARD COUNTY AND MAINTAINED BY BGE.

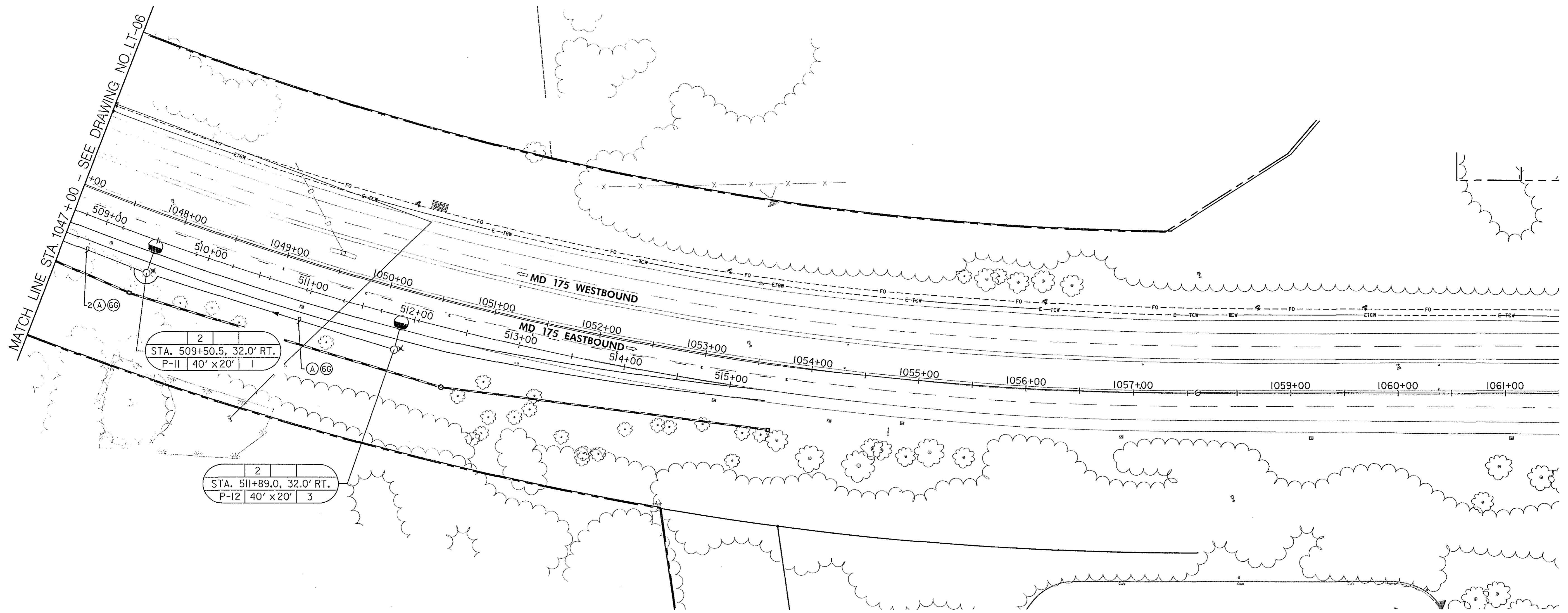
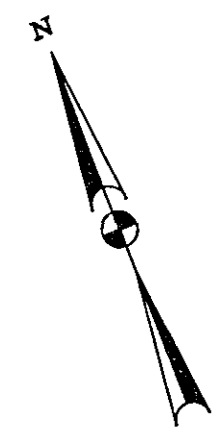
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND.	
<i>J. P. Van</i> 7/15/14 DIRECTOR OF PUBLIC WORKS DATE	<i>M. Butler</i> 7/1/14 CHIEF, BUREAU OF ENGINEERING DATE
<i>John Searns</i> 7/11/14 CHIEF, BUREAU OF HIGHWAYS DATE	<i>Steve Shaner</i> 7/1/14 CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
BLANDAIR REGIONAL PARK
PHASE J - SOUTH

REVISIONS	LIGHTING PLAN	
	SCALE 1" = 50'	DATE 7/15/2014 CONTRACT NO. J-4237
	DESIGNED BY J. RASMUSSEN	COUNTY HOWARD COUNTY
	DRAWN BY J. RASMUSSEN	LOGMILE 13017505.10 - 13017506.18
	CHECKED BY J. MOCNY	TMS NO.
	F.A.P. NO. N/A	TOD NO.
	DRAWING NO. LT-06 OF 7	SHEET NO. 133 OF 138

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."





CONVENTIONS LEGEND	PLAN SYMBOLS LEGEND
<p>SHA MANHOLE/HANDHOLE TAG</p> <p>MANHOLE/HANDHOLE NUMBER</p> <p>TYPE 1: MH#XXX-XX</p> <p>NUMBER OF CONNECTOR KITS: XX XX</p> <p>TYPE 4</p> <p>HOWARD CO. LIGHTING TAG</p> <p>STATION NUMBER: STA. + ' , T.</p> <p>POLE NUMBER: P#</p> <p>MOUNTING HEIGHT X MAST ARM LENGTH: MH' x AL'</p> <p>SHA LIGHTING TAG</p> <p>TYPE 1, TYPE 2, TYPE 3, TYPE 4</p> <p>NUMBER OF CONNECTOR KITS: # # # #</p> <p>STATION NUMBER: STA. + ' , T.</p> <p>POLE NUMBER: P#</p> <p>MOUNTING HEIGHT X MAST ARM LENGTH: MH' x AL'</p> <p>CIRCUIT NUMBER: #</p>	<p>----- PROPOSED SCHEDULE 80 PVC CONDUIT - TRENCHED (SIZE AS NOTED ON PLANS)</p> <p>----- PROPOSED 4 INCH SCHEDULE 80 PVC CONDUIT - BORED</p> <p>----- PROPOSED CIRCUIT</p> <p>○ PROPOSED LED ROADWAY LUMINAIRE, GROUND MOUNTED (SHA)</p> <p>○ PROPOSED LED COBRAHEAD LUMINAIRE, GROUND MOUNTED (HOWARD CO.)</p> <p>○(X) EXISTING LIGHT STRUCTURE TO BE REMOVED</p> <p>⊕ PROPOSED GROUND ROD</p> <p>H BGE SUPPLIED HAND BOX</p> <p>M PROPOSED LIGHTING MANHOLE (SHA)</p> <p>C PROPOSED LIGHTING CONTROL CABINET, POLE MOUNT (SHA)</p> <p>Ⓞ #6 AWG BARE COPPER GRD WIRE</p> <p>ⓐ 2/C #6 AWG DUCT CABLE</p> <p>ⓑ 1/C #6 AWG, TYPE USE, 600V ELECTRICAL CABLE</p> <p>P PROPOSED METERED SERVICE PEDESTAL</p> <p>➔ DIRECTION OF CIRCUIT RUN BACK TO CABINET</p>

- GENERAL NOTES:**
- ALL LIGHT POLES, FOUNDATIONS, MANHOLES, CABINET, ELECTRICAL CABLES, AND ELECTRICAL SERVICE UTILITY EQUIPMENT ON THIS PLAN SHEET ARE TO BE INSTALLED BY THE CONTRACTOR AND OWNED AND MAINTAINED BY SHA.
 - POLE NOS. 1-7, 9-12 WILL BE OWNED AND MAINTAINED BY SHA. POLE NOS. 101-126 WILL BE OWNED BY HOWARD COUNTY AND MAINTAINED BY BGE.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

Jay De 7/11/14 DATE: 7/11/14
DIRECTOR OF PUBLIC WORKS CHIEF, BUREAU OF ENGINEERING

Norman S. Butler 7/11/14 DATE: 7/11/14
CHIEF, BUREAU OF HIGHWAYS CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
BLANDAIR REGIONAL PARK
PHASE J-- SOUTH

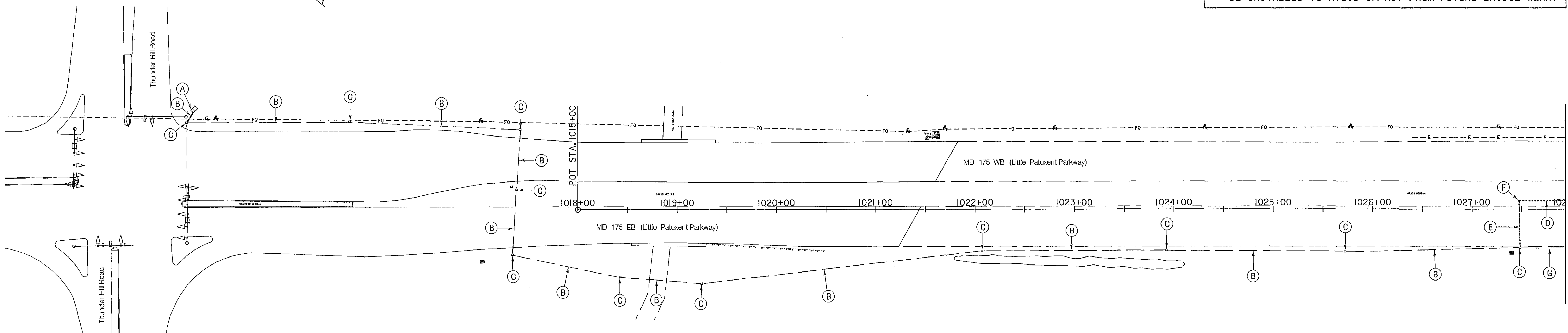
REVISIONS	LIGHTING PLAN	
	SCALE 1" = 50'	DATE 7/11/2014 CONTRACT NO. J-4237
	DESIGNED BY J. RASMUSSEN	COUNTY HOWARD COUNTY
	DRAWN BY J. RASMUSSEN	LOGMILE 13017505.10 - 13017506.18
	CHECKED BY J. MOCNY	TMS NO.
	F.A.P. NO. NA	TOD NO.
	DRAWING NO. LT-07 OF 7	SHEET NO. 134 OF 138

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."



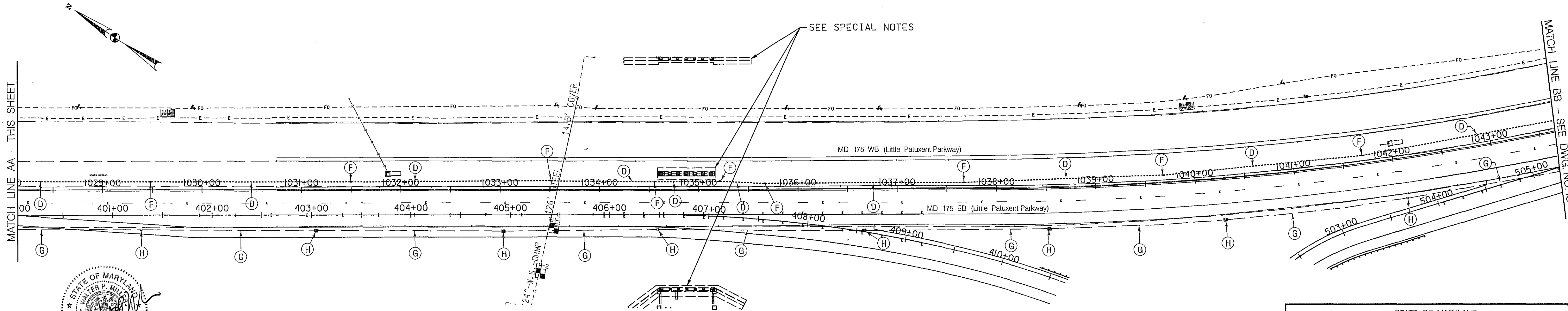
SPECIAL NOTES:

- BETWEEN STA. 1034+00 AND STA. 1036+00 CONDUIT SHALL BE INSTALLED 7.5' LT. OF BASELINE TO AVOID IMPACTS BY FUTURE BRIDGE CONSTRUCTION.
- FUTURE BRIDGE LOCATION SHOWN DASHED FOR REFERENCE PURPOSES ONLY. PROPOSED CONDUIT AND HANDBOXES SHALL BE INSTALLED TO AVOID IMPACT FROM FUTURE BRIDGE WORK.



GENERAL NOTES

- PROPOSED HANDHOLES SHALL BE LOCATED A MAXIMUM 200 FT. APART.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.



MATCH LINE AA - THIS SHEET

MATCH LINE BB - SEE DWG. NO. IC-02



"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."

CONSTRUCTION DETAILS

- USE EXISTING BASE MOUNTED CABINET AND CONTROLLER. REMOVE EXISTING INTERCONNECT CABLE AND INSTALL NEW 12 PAIR COMMUNICATION CABLE.
- USE EXISTING CONDUIT. INSTALL 12-PAIR COMMUNICATION CABLE.
- USE EXISTING HANDHOLE. INSTALL 12-PAIR COMMUNICATION CABLE.
- INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED. INSTALL 12-PAIR COMMUNICATION CABLE.
- INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED. INSTALL 12-PAIR COMMUNICATION CABLE.
- INSTALL HANDHOLE. INSTALL 12-PAIR COMMUNICATION CABLE.
- CAP AND ABANDON EXISTING CONDUIT.
- REMOVE EXSITING HANDHOLE.



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

Ray K... 2/25/14
DIRECTOR OF PUBLIC WORKS DATE

Morgan E. Suttler 7/1/14
CHIEF, BUREAU OF ENGINEERING DATE

Halger Seaman 7-11-14
CHIEF, BUREAU OF HIGHWAYS DATE

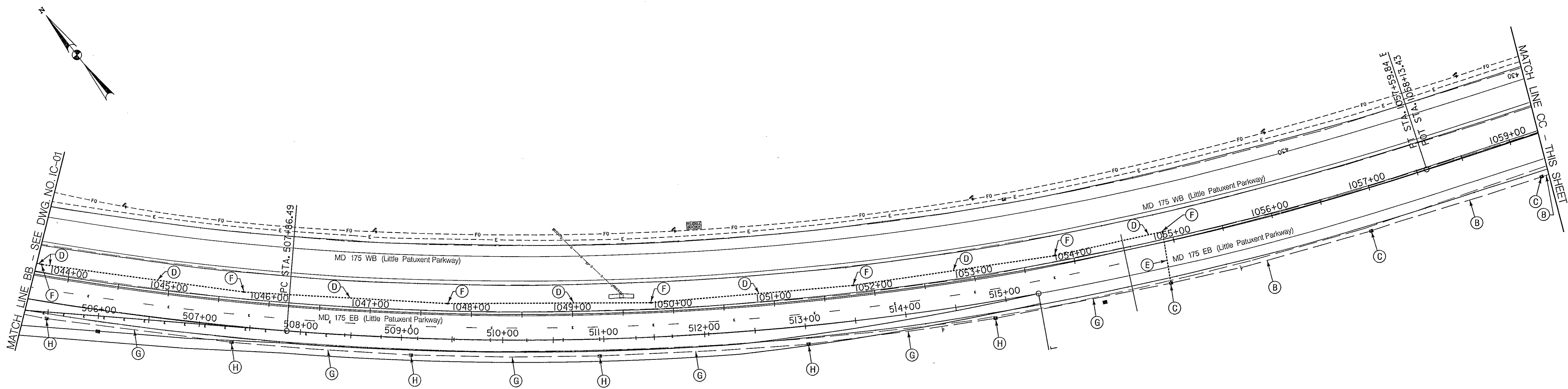
Steve Swain 7/1/14
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE

APPROVALS	REVISIONS
TEAM LEADER	
ASST. DIV. CHIEF	
DIVISION CHIEF	
OFFICE DIRECTOR	

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
BLANDAIR REGIONAL PARK
PHASE J-- SOUTH

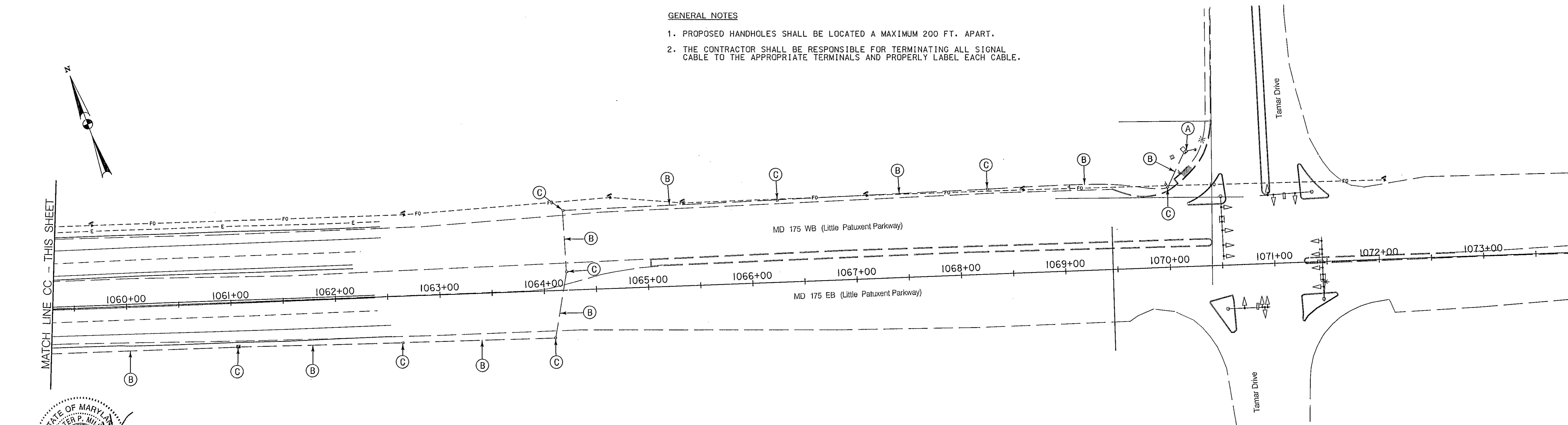
INTERCONNECT PLAN			
SCALE 1" = 50'	DATE 7/1/2014	CONTRACT NO. J-4237	
DESIGNED BY B. DONOWAY	COUNTY HOWARD COUNTY		
DRAWN BY B. DONOWAY	LOGMILE 13017505.10 - 13017506.18		
CHECKED BY J. MOCNY	TIMS NO.		
F.A.P. NO. N/A	TOD NO.		
TS NO.	DRAWING IC-01 OF 2	SHEET NO. 135 OF 138	

PLOTTED: July 08, 2014
FILE: N:\42038-00\ACADD\PSG-C001_BPU.dgn



GENERAL NOTES

1. PROPOSED HANDHOLES SHALL BE LOCATED A MAXIMUM 200 FT. APART.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.



CONSTRUCTION DETAILS

- A. USE EXISTING BASE MOUNTED CABINET AND CONTROLLER. REMOVE EXISTING AND INSTALL NEW 12 PAIR COMMUNICATION CABLE. (SEE SIGNAL PLANS)
- B. USE EXISTING CONDUIT. INSTALL 12-PAIR COMMUNICATION CABLE.
- C. USE EXISTING HANDHOLE. INSTALL 12-PAIR COMMUNICATION CABLE.
- D. INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED. INSTALL 12-PAIR COMMUNICATION CABLE.
- E. INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED. INSTALL 12-PAIR COMMUNICATION CABLE.
- F. INSTALL HANDHOLE. INSTALL 12-PAIR COMMUNICATION CABLE.
- G. CAP AND ABANDON EXISTING CONDUIT.
- H. REMOVE EXISTING HANDHOLE.

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."



WR&A
WHITMAN, REQUARDT & ASSOCIATES, LLP
 801 South Caroline Street, Baltimore, Maryland 21231

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND.

[Signature] 7/15/14 DATE
 DIRECTOR OF PUBLIC WORKS

[Signature] 7/15/14 DATE
 CHIEF, BUREAU OF ENGINEERING

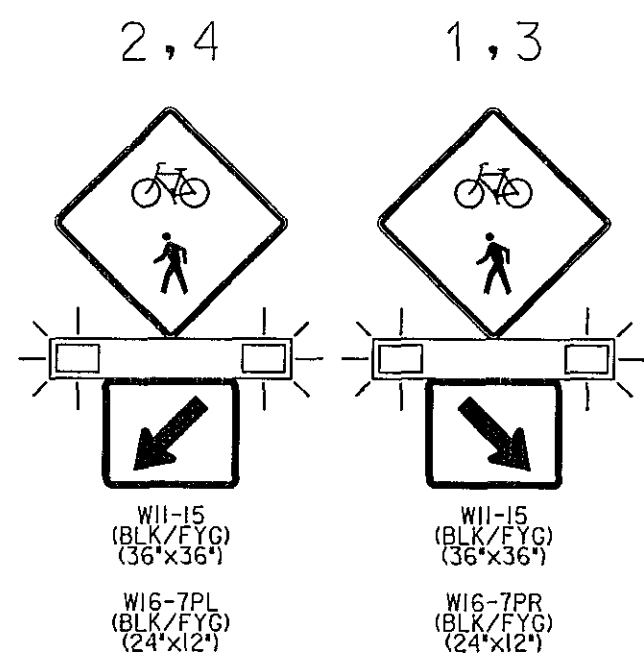
[Signature] 7/15/14 DATE
 CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION

REVISIONS

SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 OFFICE OF TRAFFIC & SAFETY
 TRAFFIC ENGINEERING DESIGN DIVISION
 BLANDAIR REGIONAL PARK
 PHASE J-- SOUTH

INTERCONNECT PLAN		
SCALE 1" = 50'	DATE 7/15/2014	CONTRACT NO. J-4237
DESIGNED BY B. DONOWAY	COUNTY HOWARD COUNTY	
DRAWN BY B. DONOWAY	LOGMILE 13017505.10 - 13017506.18	
CHECKED BY J. MOCNY	TIMS NO.	
F.A.P. NO. NA	TOD NO.	
TS NO.	DRAWING IC-02 OF 2	SHEET NO. 136 OF 138

PROPOSED RECTANGULAR BEACON SIGNS



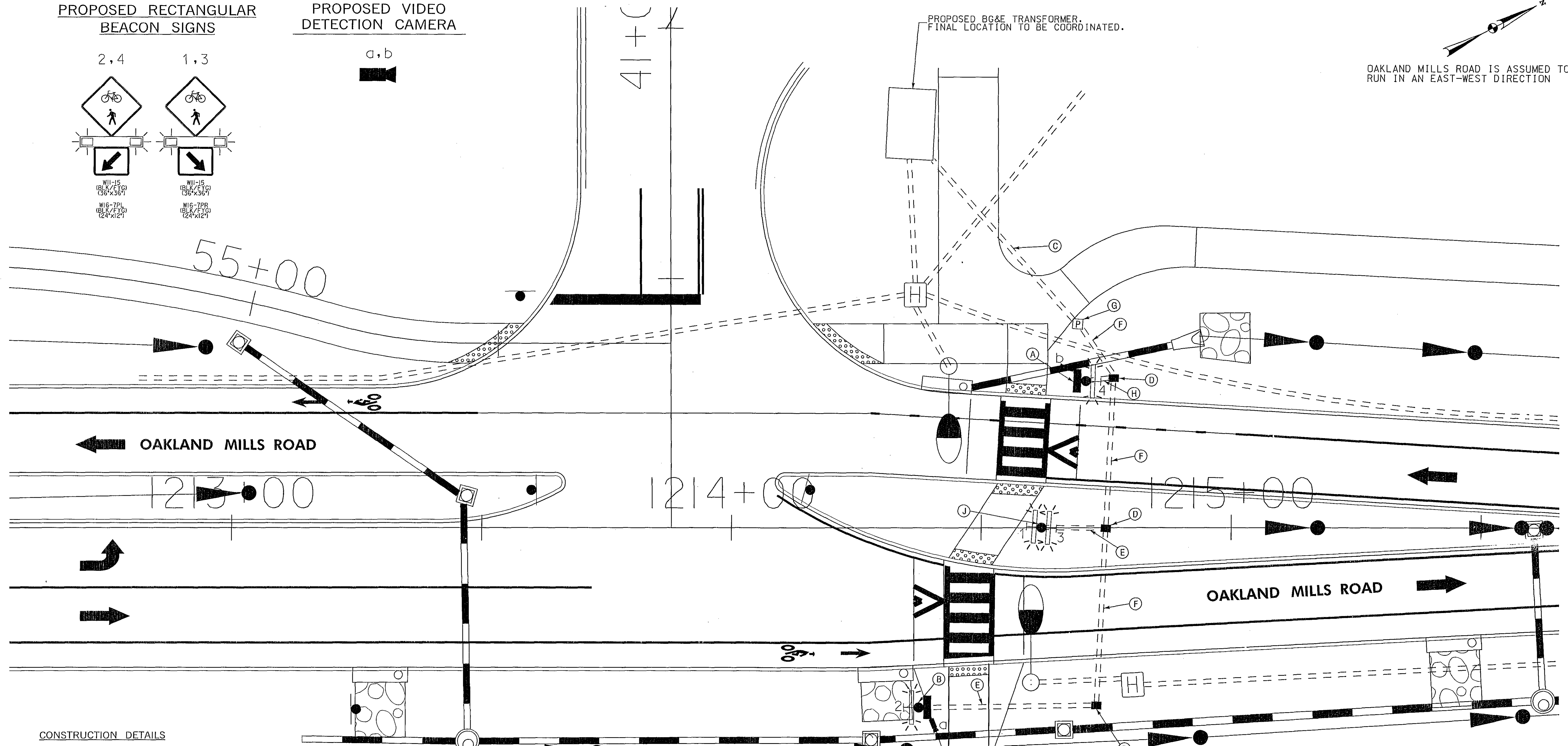
PROPOSED VIDEO DETECTION CAMERA

a, b



PROPOSED BG&E TRANSFORMER. FINAL LOCATION TO BE COORDINATED.

OAKLAND MILLS ROAD IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION



CONSTRUCTION DETAILS

- A. INSTALL 14 FT. BREAKAWAY PEDESTAL POLE, RAPID RECTANGULAR FLASHING BEACON, PEDESTRIAN VIDEO DETECTION CAMERA, SIGNS (SEE INSTALLATION DETAIL ON DWG. SG-02) AND POLE MOUNTED CABINET AND CONTROL EQUIPMENT AND 3 FT. X 4 FT. X 4 IN. CONCRETE PAD.
- B. INSTALL 14 FT. BREAKAWAY PEDESTAL POLE, RAPID RECTANGULAR FLASHING BEACON, PEDESTRIAN VIDEO DETECTION CAMERA, SIGNS (SEE INSTALLATION DETAIL ON DWG. SG-02) AND CONTROL EQUIPMENT AND 3 FT. X 4 FT. X 4 IN. CONCRETE PAD.
- C. INSTALL 3 IN. SCHEDULE 80, RIGID POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED) FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE. CAP AND MARK 2 FT. ABOVE GRADE AT PROPOSED TRANSFORMER FOR USE BY BGE.
- D. INSTALL HANDHOLE.
- E. INSTALL 2 IN. SCHEDULE 80, RIGID POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED) FOR PROPOSED ELECTRICAL SERVICE.
- F. INSTALL 3 IN. SCHEDULE 80, RIGID POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED) FOR PROPOSED ELECTRICAL SERVICE.
- G. INSTALL 100 AMP METERED SERVICE PEDESTAL. (INSTALL 1-2 IN. AND 1-3 IN. SCHEDULE 80, 90 DEGREE POLYVINYL CHLORIDE ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).
- H. INSTALL 4 IN. SCHEDULE 80, RIGID POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED) FOR PROPOSED ELECTRICAL SERVICE.
- J. INSTALL 14 FT. BREAKAWAY PEDESTAL POLE, RAPID RECTANGULAR FLASHING BEACONS, AND SIGNS (SEE INSTALLATION DETAIL ON DWG. SG-02) AND CONTROL EQUIPMENT AND 3 FT. X 4 FT. X 4 IN. CONCRETE PAD.

GENERAL NOTES

1. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
2. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
4. THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS SHOULD ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19165, EXPIRATION DATE: 06/11/2015."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231



DES: WR&A
DRN: WR&A
CHK: J.MOCNY
DATE: 7/1/2014

TRAFFIC SIGNALIZATION PLAN

**BLANDAIR REGIONAL PARK
PHASE J - SOUTH
CAPITAL PROJECT # J-4237**

DWG.
SG-01

SCALE
1" = 10'

SHEET

137 of 138

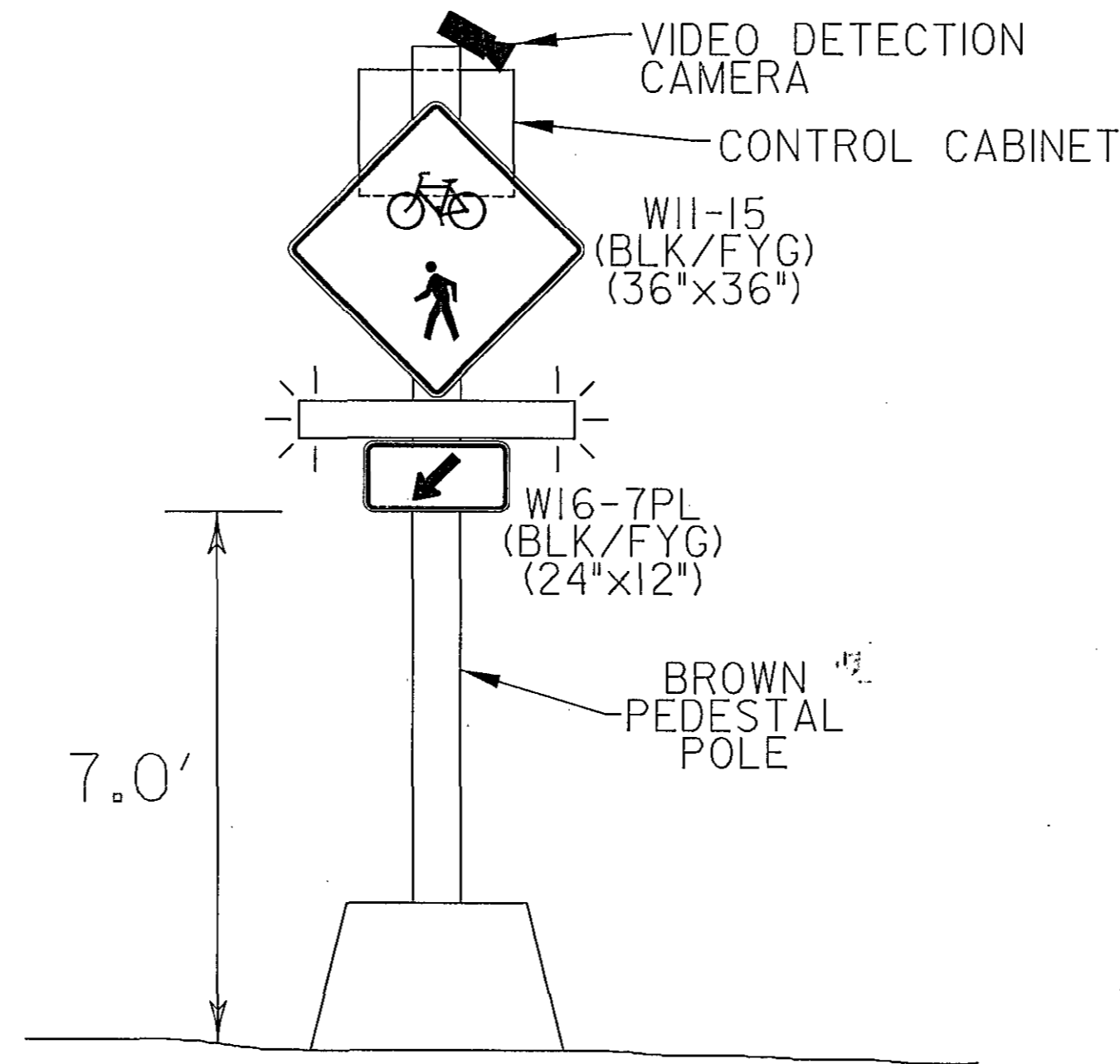
PROJECT DESCRIPTION

GENERAL
 THIS PROJECT INVOLVES THE INSTALLATION OF A BICYCLE/PEDESTRIAN RAPID RECTANGULAR FLASHING BEACONS (RRFB) ON EASTBOUND AND WESTBOUND OAKLAND MILLS ROAD AT BLANDAIR PARK NORTH ENTRANCE, LOCATED IN HOWARD COUNTY. OAKLAND MILLS ROAD IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION
 THE RRFB WILL OPERATE IN A RAPID FLASHING MODE WHEN VIDEO DETECTION CAMERA DETECTS BICYCLIST/PEDESTRIANS.

CONTROLLER REQUIREMENTS
 INSTALL TWO-CIRCUIT FLASHER UNIT WITH PEDESTRIAN VIDEO DETECTION INTERFACE AND PHOTOCCELL, DIMMER SWITCH AND INTERSECTION MONITOR WITH BATTERY BACKUP FOR PHONE DROP AND ASSOCIATED HARNESSSES HOUSED IN A NEMA SIZE "G" POLE MOUNTED CABINETS.

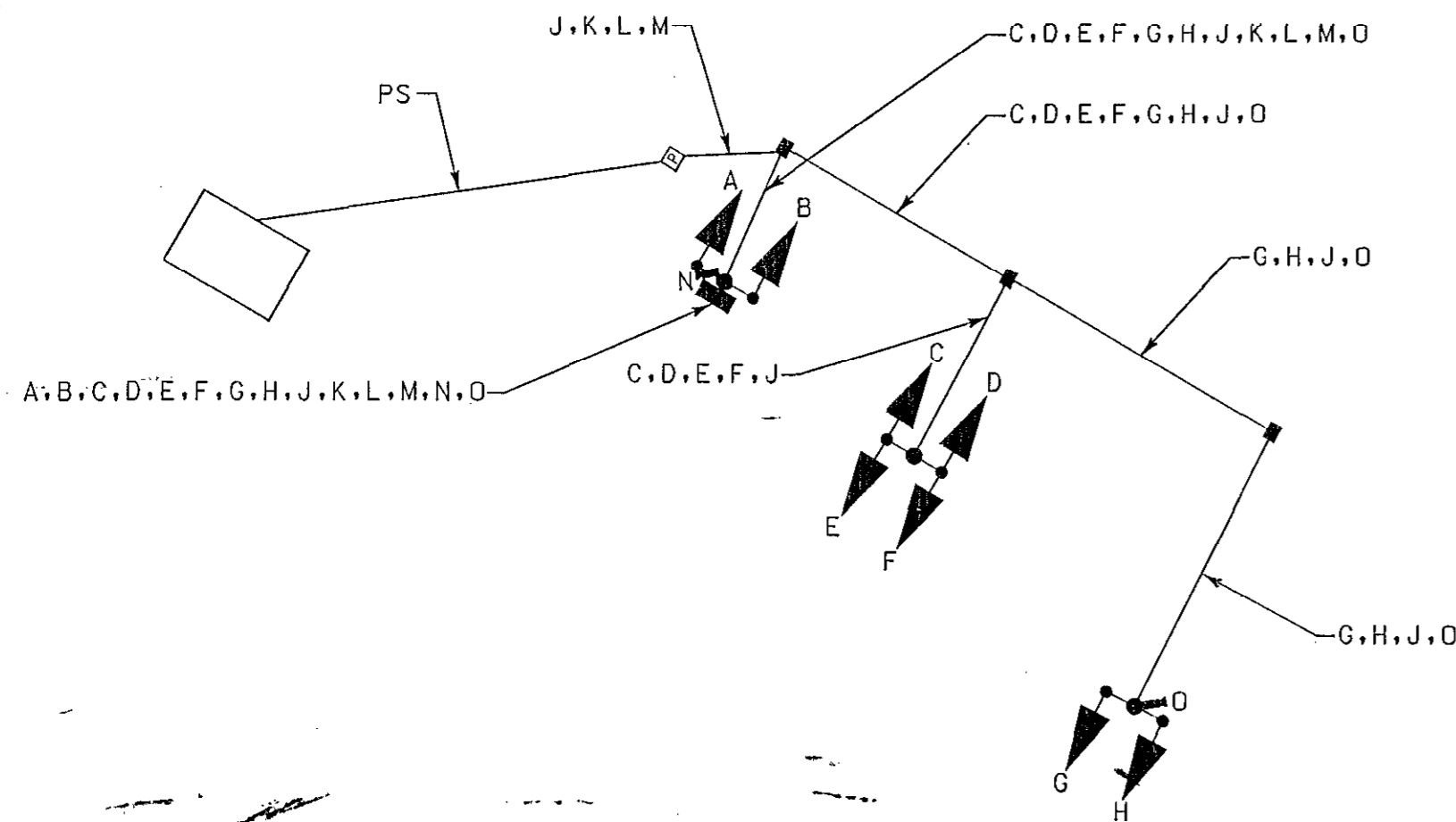
PROPOSED RRFB



NOTE
 1. POLE PAINT COLOR SHALL CONFORM TO THE FOLLOWING FEDERAL STANDARD #595A-20040-BROWN.
 A) PRIMER: SHALL BE EPOXY POLYAMIDE MEETING THE REQUIREMENTS OF SECTION 912.03.02.
 B) FINISH COAT: SHALL BE AN ALIPHATIC POLYURETHANE MEETING REQUIREMENTS OF SECTION 912.04.02.

EQUIPMENT LIST

QUANTITY	DESCRIPTION
3 EACH	19 FOOT BREAKAWAY PEDESTAL POLE
1 EACH	EMBEDDED METERED SERVICE PEDESTAL
55 L.F.	2 IN. POLYVINYL CHLORIDE (SCHEDULE 80) ELECTRICAL CONDUIT - TRENCHED
130 L.F.	3 IN. POLYVINYL CHLORIDE (SCHEDULE 80) ELECTRICAL CONDUIT - TRENCHED
10 L.F.	4 IN. POLYVINYL CHLORIDE (SCHEDULE 80) ELECTRICAL CONDUIT - TRENCHED
210 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
120 L.F.	1-CONDUCTOR ELECTRICAL CABLE (NO. 8 AWG-THHN/THWN)
3 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
675 L.F.	3-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
1 EACH	CONTROL CABINET - POLE MOUNTED
2 EACH	PEDESTRIAN VIDEO DETECTION CAMERA
3 EACH	WIRELESS CONTROLLED, PEDESTRIAN VIDEO DETECTION ACTIVATED, LED RECTANGULAR RAPID-FLASH BEACON WITH POLE MOUNTED CONTROLLER CABINET



WIRING KEY

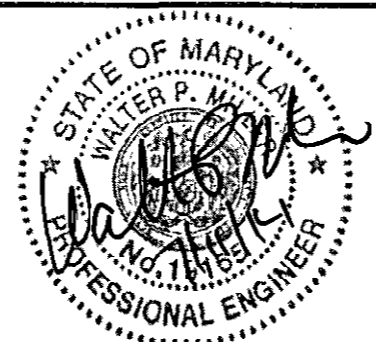
- A E } 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- B F }
- C G }
- D H }
- J } NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
- K L } 1-CONDUCTOR ELECTRICAL CABLE (NO. 8 A.W.G. THHN/THWN)
- M }
- N } PEDESTRIAN VIDEO CAMERA
- O } DETECTION LEAD-IN CABLE
- PS - PROPOSED UNDERGROUND ELECTRICAL SERVICE
- + - 3/4 IN. X 10 FT. GROUND ROD



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DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND.
 Director of Public Works: *[Signature]* 7/15/14
 Chief, Bureau of Engineering: *[Signature]* 7/15/14
 Chief, Bureau of Highways: *[Signature]* 7-11-14
 Chief, Transportation and Special Projects Division: *[Signature]* 2/11/14

PREPARED BY:
 WHITMAN, REQUARDT & ASSOCIATES, LLP
 801 South Caroline Street, Baltimore, MD 21231



DES: WR&A			
DRN: WR&A			
CHK: J.MOCNY			
DATE: 7/11/2014	BY	NO.	REVISION

GENERAL SIGNAL INFORMATION SHEET

BLANDAIR REGIONAL PARK PHASE J - SOUTH
CAPITAL PROJECT # J-4237
 ELECTION DISTRICT 3/7 HOWARD COUNTY, MARYLAND

DWG. **SG-02**
 SCALE NONE
 SHEET **138** OF **138**