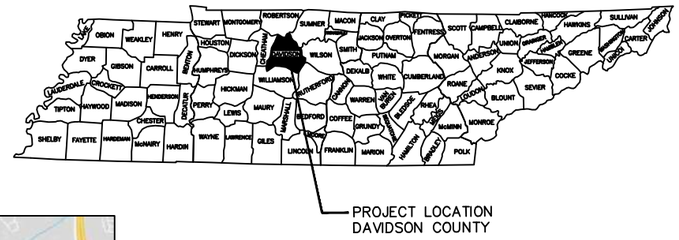
DR. D.B. TODD JR. BOULEVARD
ROADWAY / BIKE PLAN

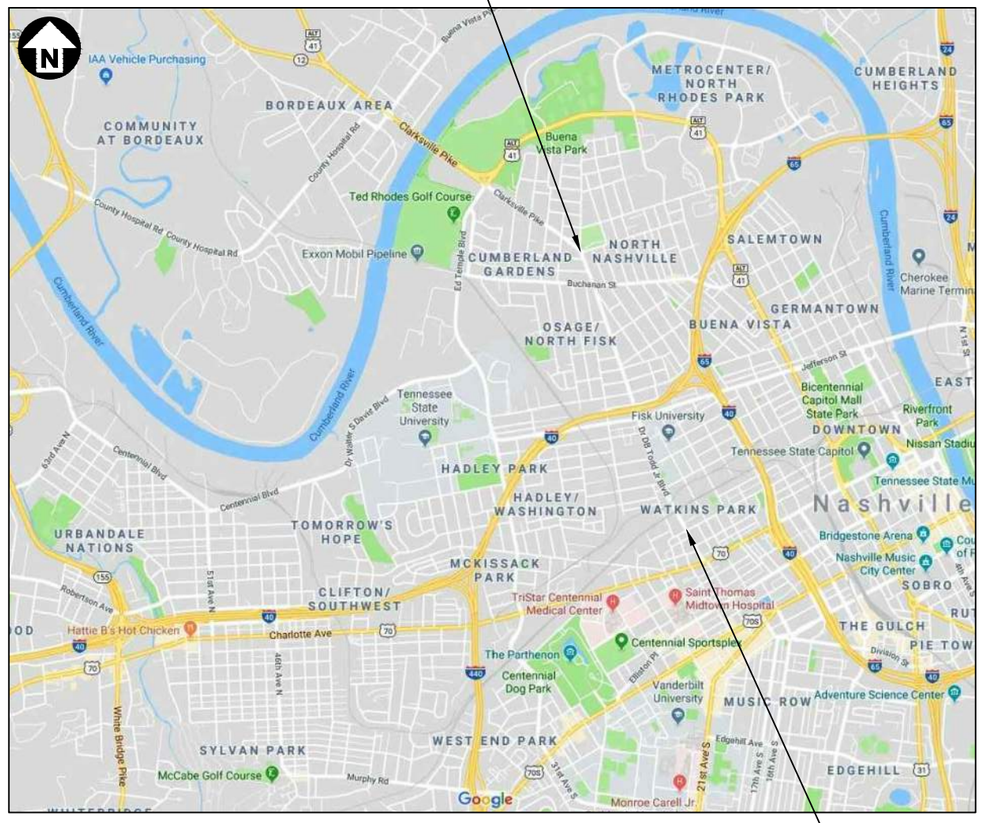
NASHVILLE, TN.

DR. D.B. TODD JR. BOULEVARD
FROM 18TH AVENUE N / CLAY STREET TO
JO JOHNSTON AVENUE



INDEX OF SHEETS
CONSTRUCTION

BEGIN PROJECT (18TH AVE. N / CLAY ST.)



END PROJECT (JO JOHNSTON AVE.)

LOCATION MAP

NOT TO SCALE

TOTAL PROJECT LENGTH 1.64 MI.

SPECIAL NOTE

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED: JANUARY 1, 2015 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND THE PROPOSAL CONTRACT.

SPECIAL NOTE:
THE BASE SURVEY AND DESIGN INFORMATION FOR ROADWAY AND UTILITIES PRESENTED ON THIS PLAN WERE PROVIDED TO KCI TECHNOLOGIES, INC BY METRO PUBLIC WORKS. WHERE AVAILABLE, BASE INFORMATION HAS BEEN SUPPLEMENTED BYFIELD OBSERVATIONS BY THE ENGINEER. KCI TECHNOLOGIES, INC MAKES NO CLAIMS AS TO THE COMPLETENESS OR ACCURACY OF THE PROVIDED BASE INFORMATION.

DESIGNED BY KCI TECHNOLOGIES, INC.

DESIGNER JOSH GREEN, P.E.

P.E. NO. 118284

MPW/TDOT STANDARD DRAWINGS

DRAWING NO.	DESCRIPTION	DIVISION
ST-502	BIKE LANES WITH ON-STREET PARKING PERMITTED	MPW
ST-503	BIKE LANES WITH ON-STREET PARKING PROHIBITED	MPW
ST-504	PAVEMENT MARKINGS AND SIGNS FOR BIKE LANES	MPW
T-M-1	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS	TDOT / ROADWAY
T-M-2	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS	TDOT / ROADWAY
T-M-3	MARKING STANDARDS FOR TRAFFIC ISLANDS, MEDIANS & PAVED SHOULDERS ON CONVENTIONAL ROADS	TDOT / ROADWAY
T-M-4	STANDARD INTERSECTION PAVEMENT MARKINGS	TDOT / ROADWAY
T-M-11	SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES OR ROUTES	TDOT / ROADWAY
T-M-13	SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES	TDOT / ROADWAY
T-M-14	SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES AT INTERSECTIONS	TDOT / ROADWAY

FILE NO.	891704370.03
DATE:	8/XX/18
DESIGNED BY:	JEG
DRAWN BY:	DKC
CHECKED BY:	JMC

REVISION BLOCK

DATE:		

KCI TECHNOLOGIES

ALL CONSTRUCTION ACTIVITIES SHALL BE COMPLETED IN FULL COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD, FEDERAL REGISTER 36 CFR PARTS 1190 AND 1191, ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES, ARCHITECTURAL BARRIERS ACT (ABA) ACCESSIBILITY GUIDELINES, PROPOSED RULE. PUBLISHED IN THE FEDERAL REGISTER ON JULY 23, 2004, AS HAS BEEN ADOPTED BY METRO.

ACCEPTED BY : _____

DATE : _____

METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

ROADWAY / BIKE PLAN

Title Sheet

SCALE: N.T.S.

SHEET 1 OF X

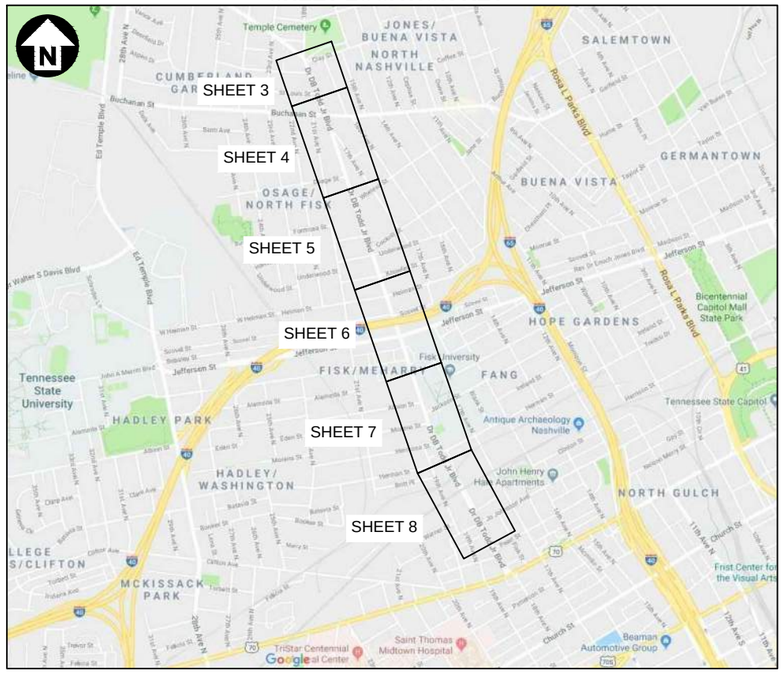
TRAFFIC DATA

ROADWAY	LIMITS	MPH
DR. D.B. TODD JR. BOULEVARD	18TH AVENUE N / CLAY STREET TO JO JOHNSTON AVENUE	*30

SPECIAL NOTE(S):

- PLAN DESIGN IS BASED ON EXISTING CONDITIONS.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF SIGN ITEMS.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ROADWAY MARKINGS.
- BIKEWAY SIGNAGE SHALL BE PLACED PER DIRECTION OF FIELD ENGINEER OR AS NOTED ON THE PLANS.
- SHARROW AND BIKE LANE PAVEMENT MARKING SHALL BE PLACED PER DIRECTION OF FIELD ENGINEER OR AS NOTED ON THE PLANS.
- SHARROW AND BIKE LANE PAVEMENT MARKING SHALL NOT BE PLACED IN FRONT OF DRIVEWAYS.
- DELINEATORS SHALL NOT BE PLACED IN FRONT OF DRIVEWAYS OR INTERSECTIONS.
- BIKEWAY PROJECT SHALL COORDINATE WITH METRO TRAFFIC DEPARTMENT.

SHEET LOCATION KEY



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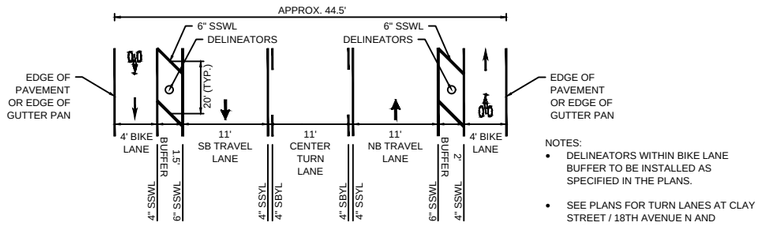
KCI TECHNOLOGIES

METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

ROADWAY / BIKE PLAN

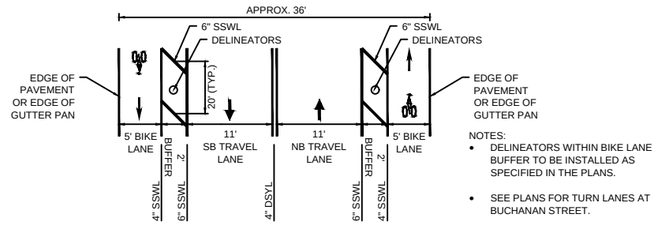
Estimated Quantities

SCALE: N.T.S.



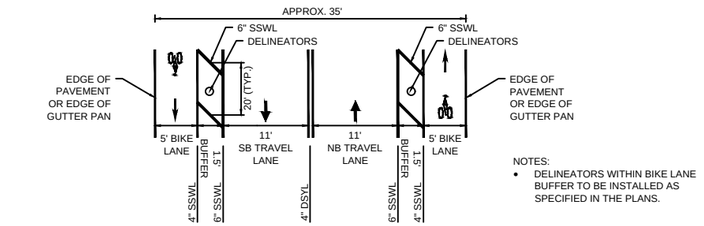
NOTES:
- DELINEATORS WITHIN BIKE LANE BUFFER TO BE INSTALLED AS SPECIFIED IN THE PLANS.
- SEE PLANS FOR TURN LANES AT CLAY STREET / 18TH AVENUE N AND BUCHANAN STREET.

ROADWAY CROSS-SECTION DETAILS - SECTION A-A
DR. DB TODD JR. BLVD. - FROM CLAY STREET TO BUCHANAN STREET



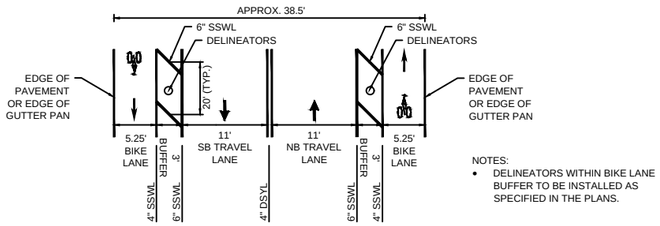
NOTES:
- DELINEATORS WITHIN BIKE LANE BUFFER TO BE INSTALLED AS SPECIFIED IN THE PLANS.
- SEE PLANS FOR TURN LANES AT BUCHANAN STREET.

ROADWAY CROSS-SECTION DETAILS - SECTION B-B
DR. DB TODD JR. BLVD. - FROM BUCHANAN STREET TO WHELESS STREET



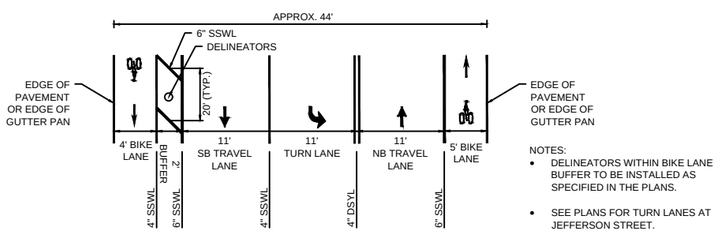
NOTES:
- DELINEATORS WITHIN BIKE LANE BUFFER TO BE INSTALLED AS SPECIFIED IN THE PLANS.

ROADWAY CROSS-SECTION DETAILS - SECTION C-C
DR. DB TODD JR. BLVD. - FROM WHELESS STREET TO HEIMAN STREET



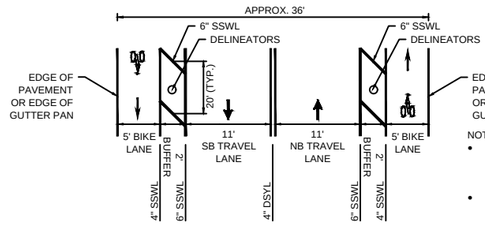
NOTES:
- DELINEATORS WITHIN BIKE LANE BUFFER TO BE INSTALLED AS SPECIFIED IN THE PLANS.

ROADWAY CROSS-SECTION DETAILS - SECTION D-D
DR. DB TODD JR. BLVD. - FROM HEIMAN STREET TO SCOVEL STREET



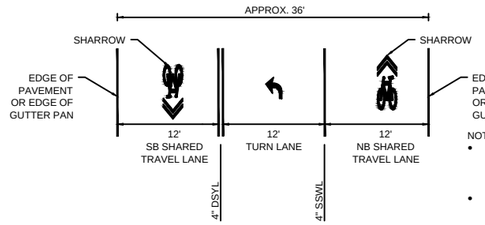
NOTES:
- DELINEATORS WITHIN BIKE LANE BUFFER TO BE INSTALLED AS SPECIFIED IN THE PLANS.
- SEE PLANS FOR TURN LANES AT JEFFERSON STREET.

ROADWAY CROSS-SECTION DETAILS - SECTION E-E
DR. DB TODD JR. BLVD. - FROM SCOVEL STREET TO JEFFERSON STREET



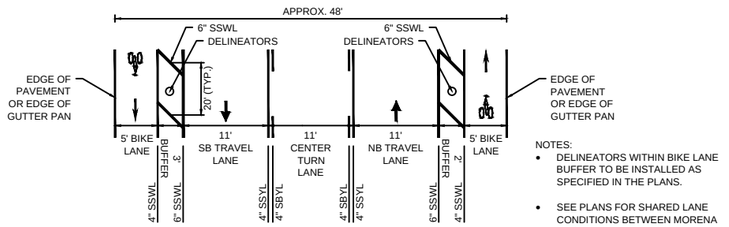
NOTES:
- DELINEATORS WITHIN BIKE LANE BUFFER TO BE INSTALLED AS SPECIFIED IN THE PLANS.
- SEE PLANS FOR TURN LANES AT JEFFERSON STREET.

ROADWAY CROSS-SECTION DETAILS - SECTION F-F
DR. DB TODD JR. BLVD. - FROM JEFFERSON STREET TO ALBION STREET



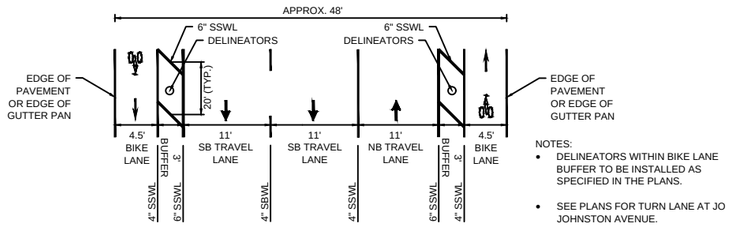
NOTES:
- DELINEATORS WITHIN BIKE LANE BUFFER TO BE INSTALLED AS SPECIFIED IN THE PLANS.
- SEE PLANS FOR TURN LANES AND CENTER TURN LANE AT ALBION STREET AND MORENA STREET.

ROADWAY CROSS-SECTION DETAILS - SECTION G-G
DR. DB TODD JR. BLVD. - FROM ALBION STREET TO MORENA STREET



NOTES:
- DELINEATORS WITHIN BIKE LANE BUFFER TO BE INSTALLED AS SPECIFIED IN THE PLANS.
- SEE PLANS FOR SHARED LANE CONDITIONS BETWEEN MORENA STREET AND HERMOSA STREET.

ROADWAY CROSS-SECTION DETAILS - SECTION E-E
DR. DB TODD JR. BLVD. - FROM MORENA STREET TO HERMOSA STREET



NOTES:
- DELINEATORS WITHIN BIKE LANE BUFFER TO BE INSTALLED AS SPECIFIED IN THE PLANS.
- SEE PLANS FOR TURN LANE AT JO JOHNSTON AVENUE.

ROADWAY CROSS-SECTION DETAILS - SECTION E-E
DR. DB TODD JR. BLVD. - FROM MORENA STREET TO HERMOSA STREET

GENERAL NOTES

- BASE MAPPING WAS PREPARED FROM GIS DATA BY METRO PLANNING AND/OR METRO PUBLIC WORKS. WHERE AVAILABLE BASE INFORMATION HAS BEEN SUPPLEMENTED BY FIELD OBSERVATIONS BY THE ENGINEER. WHEN THESE PLANS ARE IN CONFLICT WITH EXISTING SITE CONDITIONS, PROPOSED STRIPING AND SIGNS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER OR METRO PUBLIC WORKS. KCI TECHNOLOGIES, INC. MAKES NO CLAIM AS TO THE COMPLETENESS OR ACCURACY OF THE PROVIDED BASE INFORMATION.
- ALL PAVEMENT MARKINGS AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

BIKE LANE NOTES:

- DIMENSIONS OF ESTIMATED TRAVEL LANE, BIKE LANE, AND BUFFER LANE WIDTHS ARE NOTED IN THE PLANS. CONTRACTOR SHALL FIELD VERIFY. TRAVEL LANE WIDTHS TO BE 10' MINIMUM UNLESS OTHERWISE NOTED ON THE PLANS.
- REFER TO METRO PUBLIC WORKS STANDARD DETAILS ST-502, ST-503, & ST-504 FOR BIKE LANE DETAILS.
- BICYCLE BUFFER WIDTHS SHALL BE 1.5' MINIMUM WIDTH UNLESS NOTED ON THE PLANS. BUFFER HATCHING MARKINGS TO BE SPACED AT 20' ON CENTER UNLESS NOTED IN THE PLANS (6" SSWL).

MARKING LEGEND

- 4" SSWL 4" SINGLE SOLID WHITE LINE
- 4" DSYL 4" DOUBLE SOLID YELLOW LINE
- 4" DWL 4" DOTTED WHITE LINE (2' STRIPE & 4' GAP)
- 4" DDYL 4" DOUBLE DOTTED YELLOW LINE (2' STRIPE & 4' GAP)
- 6" SSWL 6" SINGLE SOLID WHITE LINE
- 6" DWL 6" DOTTED WHITE LINE (BICYCLE CONFLICT LINES - 2' STRIPE & 4' GAP)
- 8" SSWL 8" SINGLE SOLID WHITE LINE

LEGEND

- - -	2' x 4' DOTTED PAVEMENT MARKING LINE
	TURN LANE ARROW
	2' STOP LINE
	BIKE LANE PAVEMENT MARKING SYMBOL
	SHARROW PAVEMENT MARKING SYMBOL
	PROPOSED SIGN
	EXISTING SIGN
MB	EXISTING MAILBOX
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING FIRE HYDRANT
B	BUS STOP
	36" FLEXIBLE DELINEATOR (WHITE)

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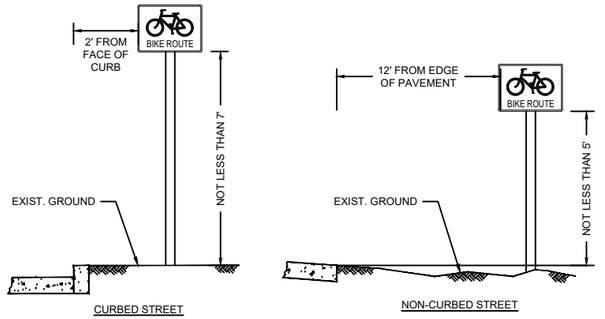
METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

ROADWAY / BIKE PLAN

Detail Sheet

SCALE: N.T.S.

SHEET 2A OF 10

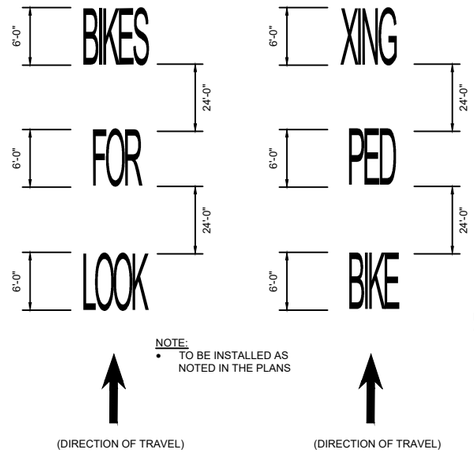


HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATIONS

SIGN INSTALLATION NOTES:

1. ALL SIGNS SHALL BE INSTALLED IN THE APPROXIMATE LOCATIONS SHOWN ON PLAN SHEETS. ANY DEVIATION MUST BE APPROVED BY THE METROPOLITAN DEPARTMENT OF PUBLIC WORKS.
2. SIGNS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM CONTROL DEVICES, AND SHALL HAVE THE HEIGHT AND CLEARANCE SPECIFICATIONS SHOWN ON THIS SHEET.
3. ALL SIGNING EQUIPMENT AND INSTALLATION PROCEDURES SHALL COMPLY WITH THE T.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 713 - HIGHWAY SIGNING, AND WITH THE SPECIFICATIONS OF METROPOLITAN NASHVILLE AND DAVIDSON COUNTY.

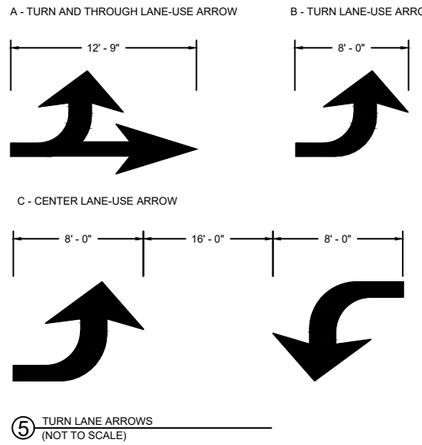
① HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATIONS
(NOT TO SCALE)



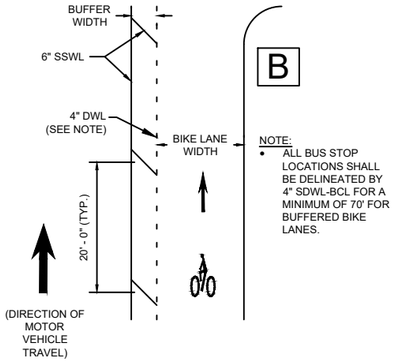
NOTE:
- TO BE INSTALLED AS NOTED IN THE PLANS

④ PAVEMENT MARKING WORD DETAILS
(NOT TO SCALE)

NOTE:
- REFER TO MUTCD 2009 EDITION PART 3 FIGURE 3B-24. EXAMPLES OF STANDARD ARROWS FOR PAVEMENT MARKINGS

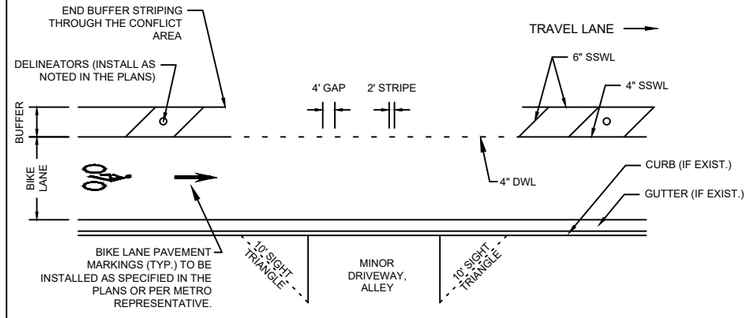


⑤ TURN LANE ARROWS
(NOT TO SCALE)

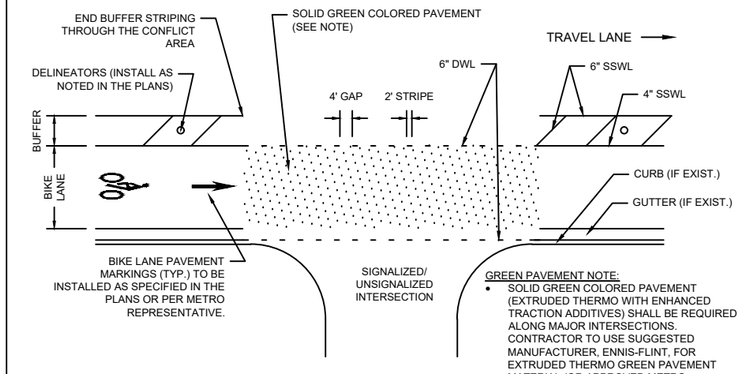


NOTE:
- ALL BUS STOP LOCATIONS SHALL BE DELINEATED BY 4" SDWL-BCL FOR A MINIMUM OF 70' FOR BUFFERED BIKE LANES.

⑧ BUS STOP / BIKE LANE DETAILS
(NOT TO SCALE)

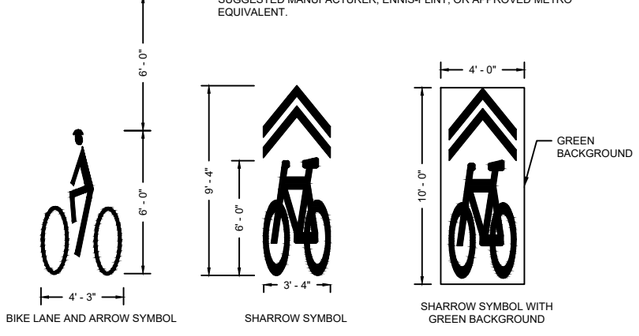


② SIGHT TRIANGLE & BIKE CONFLICT LINE (BCL) DETAIL AT DRIVEWAYS
(NOT TO SCALE)



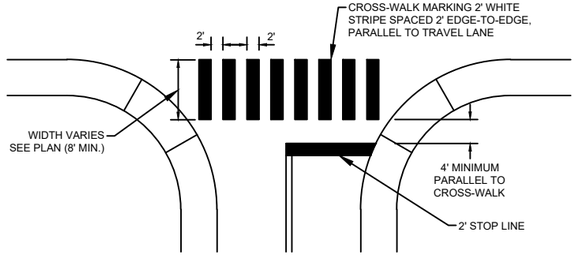
GREEN PAVEMENT NOTE:
- SOLID GREEN COLORED PAVEMENT (EXTRUDED THERMO WITH ENHANCED TRACTION ADDITIVES) SHALL BE REQUIRED ALONG MAJOR INTERSECTIONS. CONTRACTOR TO USE SUGGESTED MANUFACTURER, ENNIS-FLINT, FOR EXTRUDED THERMO GREEN PAVEMENT MATERIAL (OR APPROVED METRO EQUIVALENT).

③ BIKE CONFLICT LINE (BCL) DETAIL AT INTERSECTIONS
(NOT TO SCALE)

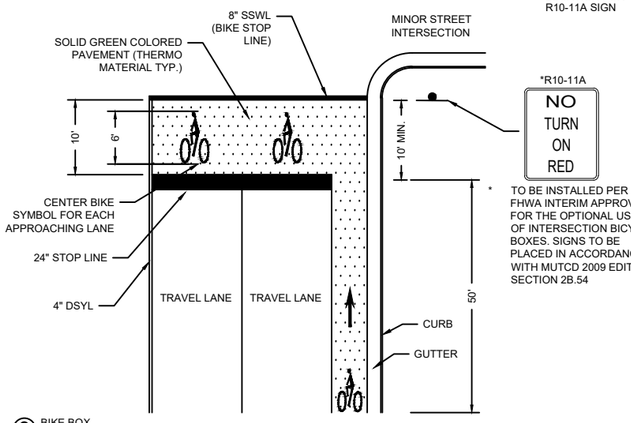


NOTES:
- REFER TO MUTCD 2009 EDITION PART 9 FIGURE 9C-3 WORD, SYMBOL, AND ARROW PAVEMENT MARKINGS FOR BICYCLE LANES. REDUCED SIZE MARKINGS TO BE USED WHERE REQUIRED IN THE FIELD. REFER TO FIGURE 9C-9 FOR SHARED LANE MARKINGS.
- FOR GREEN BACKGROUND MATERIAL, CONTRACTOR TO USE SUGGESTED MANUFACTURER, ENNIS-FLINT, OR APPROVED METRO EQUIVALENT.

⑥ BIKE LANE PAVEMENT AND SHARROW MARKING DETAIL
(NOT TO SCALE)



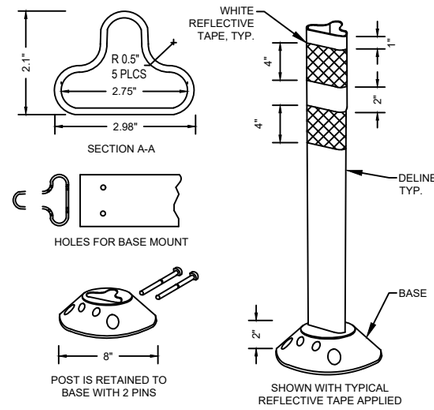
⑦ STOP LINE AND CROSSWALK PLACEMENT DETAILS
(NOT TO SCALE)



* TO BE INSTALLED PER FHWA INTERIM APPROVAL FOR THE OPTIONAL USE OF INTERSECTION BICYCLE BOXES. SIGNS TO BE PLACED IN ACCORDANCE WITH MUTCD 2009 EDITION SECTION 2B.54

⑨ BIKE BOX
(NOT TO SCALE)

BIKE BOX NOTES
- SOLID GREEN COLORED PAVEMENT (EXTRUDED THERMO WITH ENHANCED TRACTION ADDITIVES) SHALL BE REQUIRED FOR BIKE BOX INSTALLATIONS. CONTRACTOR TO USE SUGGESTED MANUFACTURER, ENNIS-FLINT, FOR EXTRUDED THERMO GREEN PAVEMENT MATERIAL (OR APPROVED METRO EQUIVALENT).
- WHERE A BIKE BOX IS PROVIDED ACROSS MULTIPLE LANES OF AN APPROACH, COUNTDOWN PEDESTRIAN SIGNALS SHALL BE PROVIDED FOR THE CROSSWALKS ACROSS THE APPROACH ON WHICH THE BIKE BOX IS LOCATED.



NOTES:
- INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- DIMENSIONS, MATERIALS, AND ATTACHMENTS MAY VARY BETWEEN MANUFACTURERS.
- COLOR OF POST SHALL MATCH COLOR OF APPLICABLE EDGE LINE AS NOTED IN THE PLANS.
- SUGGESTED MANUFACTURERS INCLUDE: PEXCO DAVIDSON TRAFFIC CONTROL, SUPERIOR TRAFFIC CONTROL OR APPROVED BY METRO REPRESENTATIVE
- DELINEATORS SHALL BE SPACED 20' CENTER-TO-CENTER OR AS NOTED IN THE PLANS.

⑩ 36" WHITE FLEXIBLE DELINEATOR POST DETAIL
(NOT TO SCALE)

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KCI TECHNOLOGIES

METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

ROADWAY / BIKE PLAN

Detail Sheet

SCALE: N.T.S.

SHEET 2B OF 10

GENERAL NOTES

6-100.00

GRADING

(1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

(2) CERTIFICATION FOR ALL BORROW PITS MUST BE OBTAINED IN ACCORDANCE WITH SUBSECTION 107.06 OF THE STANDARD SPECIFICATIONS.

(3) THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) WITHOUT APPROVAL BY FEMA. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.

(4) ARCHAEOLOGICAL SITE NO. _____ MUST BE AVOIDED AS A SOURCE OF FILL OR HEAVY MACHINERY STAGING AREA. EARTH FILL WILL BE REQUIRED FROM AREAS OUTSIDE THE PROPOSED RIGHT-OF-WAY. CERTIFICATION MUST BE OBTAINED IN ACCORDANCE WITH SUBSECTION 107.06 OF THE STANDARD SPECIFICATIONS.

6-105.00

SEEDING AND SODDING

(1) ALL EXISTING ROADS WITHIN THE RIGHT-OF-WAY AND NOT IN THE GRADED AREA THAT ARE TO BE ABANDONED SHALL BE SCARIFIED, OBLITERATED, TOPSOILED AND SEEDED. SCARIFYING AND OBLITERATING THE PAVEMENT WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS. TOPSOIL, IN ACCORDANCE WITH SECTION 203 OF THE STANDARD SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEMS 203-04 AND/OR 203-07. SEEDING, IN ACCORDANCE WITH SECTION 801 OF THE STANDARD SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEM 801-01.

(2) SOD SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS TO PREVENT DAMAGE TO ADJACENT FACILITIES AND PROPERTY DUE TO EROSION ON ALL NEWLY GRADED CUT AND FILL SLOPES AS WORK PROGRESSES.

NOTE: SEE SECTION 4-801.05. NOTE (3) SHALL BE PLACED IN THE GENERAL NOTES WITH THE BLANK BEING FILLED IN WITH THE PROPER ITEM NUMBER.

(3) ITEM NO. ____ SHALL BE USED ON SLOPES 3:1 OR STEEPER AND OTHER AREAS AS INDICATED IN THE PLANS THAT ARE INACCESSIBLE FOR MOWING.

(4) ITEM NO. 801-01, SEEDING (WITH MULCH), SHALL BE USED WHERE EROSION CONTROL BLANKET OR SOD ARE NOT APPLIED.

(5) ITEM NO. 801-02, SEEDING (WITHOUT MULCH) AND EROSION CONTROL BLANKET, SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS AS WELL AS LOCATIONS DIRECTED BY THE ENGINEER.

6-110.00

GUARDRAIL

(6) THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.

NOTE: NOTE (2) NOT NECESSARY IF NOTE (1) IS USED.

(7) THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.

NOTE: NOTE (3) NOT NECESSARY IF NOTE (2) IS USED.

(8) IF ANY APPROACH END OF A SECTION OF GUARDRAIL OR BRIDGE RAIL MUST TEMPORARILY BE LEFT INCOMPLETE AND EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL USE TWO (2) TEMPORARY BARRICADES OR DRUMS WITH TYPE "A" LIGHTS AND ROUNDED END ELEMENTS AS MINIMUM MEASURES TO PROTECT TRAFFIC FROM THE HAZARD OF AN EXPOSED END. ALL COST OF FURNISHING AND INSTALLING TEMPORARY BARRICADES OR DRUMS WITH TYPE "A" LIGHTS TO DELINEATE GUARDRAIL END AND A TEMPORARY ROUNDED END ELEMENT SHALL BE INCLUDED IN THE COST OF THE PROPOSED GUARDRAIL END TERMINAL.

NOTE: NOTE (4) TO BE USED ON NEW ALIGNMENT ONLY OR IF THE ROADWAY HAS BEEN CLOSED TO TRAFFIC DURING CONSTRUCTION.

(9) GUARDRAIL IS TO BE COMPLETE IN PLACE BEFORE THE MAINLINE ROADWAY IS OPENED TO TRAFFIC.

6-115.00

DRAINAGE

(10) THE CONTRACTOR SHALL SHAPE DITCHES TO THE SPECIFIED DESIGN. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

NOTE: SEE SECTION 4-204.00.

(11) EXCAVATION FOR _____ WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT WILL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PIPE (PIPE CULVERTS, STORM SEWERS, CONDUITS, ALL OTHER CULVERTS AND MINOR STRUCTURES).

(12) CULVERT EXCAVATION FOR CONCRETE BOX OR SLAB TYPE CULVERTS OR BRIDGES WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

(13) THE CUTTING OF INLET AND OUTLET DITCHES WHERE SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER WILL BE MEASURED AND PAID FOR AS ITEM NO. 203-01 ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED).

(14) WHERE A CULVERT (PIPE, SLAB OR BOX) IS MOVED TO A NEW LOCATION OTHER THAN THAT SHOWN ON THE PLANS, INCREASING OR DECREASING THE AMOUNT OF CULVERT EXCAVATION, NO INCREASE OR DECREASE IN THE AMOUNT OF PAYMENT WILL BE MADE DUE TO SUCH CHANGE.

(15) DURING CONSTRUCTION OF DRAINAGE STRUCTURES ALL COST ASSOCIATED WITH MAINTAINING THE FLOW OF WATER AND TRAFFIC, AT THESE STRUCTURES, DURING THE PHASED CONSTRUCTION OF THIS PROJECT ARE TO BE INCLUDED IN THE UNIT PRICE OF THE DRAINAGE STRUCTURES AND TRAFFIC CONTROL ITEMS.

(16) ALL EXISTING PIPES AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER THAT ARE TO BE LEFT IN PLACE AND ABANDONED MUST BE BACKFILLED AND PLUGGED. ALL COST FOR THIS WORK SHALL BE INCLUDED IN ITEM NO. 204-08.01, BACKFILL MATERIAL (FLOWABLE FILL), C.Y.

6-120.00

FENCING

(17) LOCATION OF THE FENCE SHALL BE ONE FOOT INSIDE THE RIGHT-OF-WAY EXCEPT WHERE SHOWN ON THE PLANS.

(18) FENCES SHALL BE TURNED IN AT DRAINAGE STRUCTURES, STOCK PASSES AND BRIDGES WHERE DIRECTED BY THE ENGINEER SO AS TO ABUT WINGWALLS AND/OR ABUTMENTS.

(19) THE CONTRACTOR SHALL GIVE THE AFFECTED PROPERTY OWNERS TWO WEEKS NOTICE PRIOR TO CUTTING FENCES.

(20) THE CONTRACTOR SHALL BE REQUIRED TO INSTALL ACCESS CONTROL FENCES PRIOR TO CUTTING EXISTING STOCK FENCES IN AREAS UTILIZED BY DOMESTIC LIVESTOCK OR OTHER AREAS AS DIRECTED BY THE ENGINEER.

6-125.00

MISCELLANEOUS

(21) ALL DETOUR, ACCESS, SERVICE AND FRONTAGE ROADS SHALL BE CONSTRUCTED WITH A MINIMUM OF ONE (1) COURSE OF BASE MATERIAL BEFORE TRAFFIC IS INTERRUPTED ON EXISTING ROADS.

(22) THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND RESET MAILBOXES AND POSTS WHERE AND AS DIRECTED BY THE ENGINEER. COST TO BE INCLUDED IN PRICE BID FOR OTHER CONSTRUCTION ITEMS.

(23) NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA.

6-130.00

ROAD CLOSURE

(24) NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION: THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO: (1) LOCAL LAW ENFORCEMENT OFFICE, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) LOCAL SCHOOL SUPERINTENDENT, (5) UNITED STATES POSTAL SERVICE, AND (6) LOCAL ROAD SUPERINTENDENT.

6-135.00

PAVEMENT MARKINGS

NOTE: SEE SECTION 4-716.05 THROUGH 4-716.36.

6-135.01

TEMPORARY PAVEMENT MARKINGS ON INTERMEDIATE LAYERS

(25) TEMPORARY PAVEMENT LINE MARKINGS ON INTERMEDIATE LAYERS OF PAVEMENT SHALL BE REFLECTIVE TAPE OR REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAYS WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01, PAINTED PAVEMENT MARKING (4" LINE), L.M.

(26) TEMPORARY PAVEMENT LINE MARKINGS ON INTERMEDIATE LAYERS OF PAVEMENT SHALL BE REFLECTIVE TAPE OR REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAYS WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.20, PAINTED PAVEMENT MARKING (6" LINE), L.M.

(27) TEMPORARY PAVEMENT LINE MARKINGS ON INTERMEDIATE LAYERS OF PAVEMENT SHALL BE REFLECTIVE TAPE OR REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAYS WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.02, PAINTED PAVEMENT MARKING (8" BARRIER LINE), L.F.

(28) WIDE (8 INCH) TEMPORARY PAVEMENT MARKING LINE WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.02 PAINTED PAVEMENT MARKING (8" BARRIER LINE), L.F.

6-135.02

FINAL PAVEMENT MARKING

NOTE (5) SHOULD BE ADDED FOR ALL RESURFACING PROJECTS AND PROJECTS WITH RESURFACING OR RETRACING IN WHICH IT IS DETERMINED AT THE CONSTRUCTION FIELD REVIEW THAT BROOMING/DEGRASSING WILL BE INCLUDED IN THE PROJECT INSTEAD OF MAINTENANCE FORCES PERFORMING THIS TASK.

NOTE (6) SHOULD BE ADDED FOR ALL RESURFACING PROJECTS AND PROJECTS WITH RESURFACING OR RETRACING THAT USE OGFC IN WHICH IT IS DETERMINED AT THE CONSTRUCTION FIELD REVIEW THAT BROOMING/DEGRASSING WILL BE INCLUDED IN THE PROJECT INSTEAD OF MAINTENANCE FORCES PERFORMING THIS TASK .

(29) THE CONTRACTOR WILL BE REQUIRED TO PERFORM THE FOLLOWING WORK:

a. SHOULDERS SHALL BE BROOMED AND DE-GRASSED AND MATERIAL SHALL BE PICKED UP AND REMOVED. THIS WILL BE PAID FOR UNDER ITEM NUMBER 208-01.05.

b. REMOVE ALL GARBAGE AND CONSTRUCTION DEBRIS FROM PROJECT. THE COST FOR THIS WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

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KCI TECHNOLOGIES

METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

ROADWAY / BIKE PLAN

Notes Sheet

SCALE: N.T.S.

NOTES

1. ALL CONSTRUCTION, EQUIPMENT, AND INSTALLATION PROCEDURES SHALL COMPLY WITH THE TENNESSEE DEPARTMENT OF TRANSPORTATION (TDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. SIGNAL INSTALLATION AND EQUIPMENT SHALL COMPLY WITH SECTION 730N-TRAFFIC SIGNALS (MARCH 1, 2015). ALL PAVEMENT MARKINGS SHALL COMPLY WITH SECTION 716-PAVEMENT MARKINGS.

2. THE CONTRACTOR SHALL SUBMIT A MATERIALS LIST TO MDPW FOR REVIEW AND APPROVAL PRIOR TO START OF CONSTRUCTION (CONTACT: MIKE HIRTZER, METRO TRAFFIC ENGINEERING, 615-880-3261).

3. INITIAL SIGNAL TIMINGS ARE TO BE PROVIDED BY MDPW. THE CONTRACTOR SHALL NOTIFY MDPW A MINIMUM OF THIRTY (30) DAYS PRIOR TO ACTIVATION OF THE TRAFFIC SIGNAL.

4. CONSTRUCT THE CONTROLLER CABINET AND FOUNDATION IN ACCORDANCE WITH TDOT STANDARD DRAWINGS. AN APPROPRIATE CABINET AND FOUNDATION SHALL BE INSTALLED PER MDPW SPECIFICATIONS:
TYPE IV 55" X 44" X 26" ALUMINUM
TYPE IV-C 50" X 36" X 17¾" ELECTROSTATIC PAINTED BLACK.

5. THE CONTRACTOR SHALL CONNECT THE EXISTING SIGNAL COMMUNICATIONS CABLE TO THE NEW TRAFFIC SIGNAL CONTROLLER CABINET. THE CONNECTION SHALL BE MADE BY SPLICING THE EXISTING CABLE IN A MANNER ACCEPTABLE TO MDPW. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH MDPW AND RECEIVE MDPW APPROVAL PRIOR TO SPLICING THE EXISTING CABLE.

6. ALL UTILITY LOCATIONS, AS SHOWN, ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY. SOME UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ELECTRICAL SERVICE TO THE SITE.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL UTILITIES FOR ANY "MAKE READY" WORK REQUIRED. MDPW SHALL BE RESPONSIBLE FOR THE ACTUAL COST OF "MAKE READY" WORK.

9.A CONTRACTOR SHALL INSTALL A 50 AMP, 2 POLE WEATHERPROOF EXTERNAL DISCONNECT ON THE POLE WITH A/C SERVICE CONNECTION. ENCLOSURE SHALL BE METALLIC WITH A 50 AMP SINGLE POLE CIRCUIT BREAKER.

9.B CONTRACTOR SHALL INSTALL UNDERGROUND ELECTRIC SERVICE CONNECTION IN A TYPE B PULL BOX LABELED "TRAFFIC SIGNAL". PULL BOX SHALL HAVE A 30 AMP KTK FUSE AND WATER PROOF FUSE HOLDER WITH #6 AWG WIRES COLOR CODED BLACK, WHITE, AND GREEN. POWER SERVICE SHOULD BE INSTALLED IN A 2" CONDUIT FROM NES VAULT TO CONTROLLER CABINET.

10. VEHICLE DETECTION LOOPS SHALL MEASURE 6' X 45' QUADRAPOLE LOOPS WITH TWO TURNS OF WIRE, UNLESS SPECIFIED OTHERWISE. LOOPS SHALL BE CENTERED IN THE TRAVEL LANES. LOOPS SHALL BE INSTALLED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND MDPW LOOP SPECIFICATIONS, UNLESS OTHERWISE NOTED.

11. ALL EQUIPMENT NECESSARY FOR VIDEO DETECTION SHALL BE FURNISHED BY THE CONTRACTOR AND INSTALLED IN THE CABINET. MOUNTING HARDWARE SHALL BE OF THE ASTRO BRACKET TYPE WITH A MINIMUM HEIGHT ADJUSTMENT OF 6 FT.

12. ALL FOUNDATIONS SHALL HAVE A SPARE 2-INCH STUBOUT PARALLEL TO THE ROAD (POLES AND CONTROLLER).
13. THE PROPOSED LOCATIONS FOR THE SIGNAL SUPPORT POLES, AS SHOWN ON THESE PLANS, ARE APPROXIMATE. SOME FIELD ADJUSTMENT MAY BE REQUIRED IN ORDER TO AVOID CONFLICT WITH EITHER OVERHEAD OR UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND STAKING THE OPTIMUM LOCATIONS FOR THESE POLES AND FOR RECEIVING APPROVAL FROM THE ENGINEER AND THE APPROPRIATE UTILITIES BEFORE INSTALLATION BEGINS. PROPER ROADSIDE CLEAR ZONES SHALL BE OBSERVED.

14. SHAFTS FOR FOOTINGS SHALL BE DRILLED THROUGH FIRM, UNDISTURBED, UNSATURATED SOIL AND SHALL BE VISUALLY INSPECTED BY THE ENGINEER OR ENGINEERING REPRESENTATIVE PRIOR TO PLACEMENT OF REINFORCEMENT. THE ENGINEER OR ENGINEERING REPRESENTATIVE SHALL BE ADVISED BY THE CONTRACTOR OF ANY GROUND WATER OR LOOSE SOIL ENCOUNTERED DURING DRILLING. FOOTINGS SHALL COMPLY WITH TDOT STANDARD DRAWINGS.

15. SIGNAL HEADS VISIBLE TO DRIVERS BUT NOT OPERATIONAL SHALL BE COMPLETELY COVERED.

16. SIGNAL HEADS SHALL FLASH A MINIMUM OF SEVEN (7) DAYS PRIOR TO ACTIVATION OF THE TRAFFIC SIGNAL, UNLESS OTHERWISE SPECIFIED BY MDPW TRAFFIC ENGINEER.

17. IF FIELD ADJUSTMENTS RESULT IN CHANGES TO SIGNAL HEAD PLACEMENT, ATTACHMENT HEIGHTS, OR SPAN WIRE/MAST ARM LENGTH, THE ENGINEER SHALL BE ADVISED AND SHOP DRAWINGS SHALL BE RE-EVALUATED TO VERIFY THAT THE CHANGES ARE STRUCTURALLY ACCEPTABLE.

18. ALL STOP LINES, CROSSWALK LINES, LANE LINES, AND PAVEMENT ARROWS SHALL BE THERMOPLASTIC. STOP LINES SHALL BE 24 INCHES WIDE. ALL CONFLICTING MARKINGS SHALL BE REMOVED USING AN ACCEPTABLE METHOD AS SPECIFIED BY TDOT SPECIFICATION SECTION 712-TEMPORARY TRAFFIC CONTROL. EXISTING PAVEMENT MARKINGS SHALL BE REAPPLIED AS NECESSARY.

19. STREET NAME SIGNS ARE TO BE PROVIDED BY MDPW AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED. CONTACT MDPW SIGN SHOP A MINIMUM OF THIRTY (30) DAYS PRIOR TO EXPECTED SIGN INSTALLATION DATE FOR SIGN PREPARATION.

20. ALL ITEMS INSTALLED WITHIN THE PEDESTRIAN PATH OF TRAVEL (I.E. SIDEWALK) SHALL MEET THE METRO PUBLIC WORKS STANDARD DETAILS. THIS INCLUDES A MINIMUM PATH OF TRAVEL WIDTH OF 60" AND A PROTRUDING OBJECT LIMIT OF 4" IF MOUNTED AT A HEIGHT BETWEEN 27" AND 80" AND WITHIN THE PATH OF TRAVEL. VARIANCES MUST BE APPROVED BY MDPW.

21. EXISTING SIGNAL EQUIPMENT TO BE REMOVED BY THE CONTRACTOR. ALL SALVAGED EQUIPMENT TO BE RETURNED TO MDPW.

22. EXISTING SIGNAL EQUIPMENT SHALL REMAIN IN OPERATION UNTIL NEW SIGNAL EQUIPMENT IS COMPLETE AND IN FULL OPERATION.

23. ALL NEW SIGNAL HEADS SHALL BE FABRICATED FROM ALUMINUM. ALL NEW SIGNAL HEADS SHALL BE LED TYPE, GELCORE OR METRO APPROVED ALTERNATE. SIGNAL HEAD EQUIPMENT (I.E. FRAME AND ILLUMINATION TYPE) SHALL BE APPROVED BY MDPW PRIOR TO INSTALLATION. ATTACHMENT TO BE WITH "ASTRO" BRACKETS.

24. CABINET AND CONTROLLER MUST HAVE ALL EQUIPMENT NECESSARY TO PROVIDE SIGNAL COMMUNICATION VIA PHONE DROP. THIS INCLUDES 1" RISER WITH PULL LINE. THIS DOES NOT INCLUDE THE INSTALLATION OF THE PHONE LINE ITSELF.

25. CABINET/CONTROLLER TO INCLUDE COORDINATION MODULE, ETHERNET PORT, COMMUNICATIONS PANEL AND OTHER CABINET WIRING AS REQUIRED FOR SYSTEM OPERATION. CONTROLLER TO BE COMPATIBLE WITH EXISTING MDPW SIGNAL MANAGEMENT SOFTWARE AS SPECIFIED.

26. ALL CONSTRUCTION ACTIVITIES SHALL BE COMPLETED IN FULL COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD, FEDERAL REGISTER 36 CFR PARTS 1190 AND 1191, ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES; ARCHITECTURAL BARRIERS ACT (ABA) ACCESSIBILITY GUIDELINES; PROPOSED RULE, PUBLISHED IN THE FEDERAL REGISTER ON JULY 23, 2004, AS HAS BEEN ADOPTED BY METRO.

27. TRAFFIC SIGNAL SUPPORT POLES SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS LUMINAIRES, AND TRAFFIC SIGNALS (CURRENT EDITION WITH ADDENDA). WIND LOADS SHALL BE BASED ON A BASIC WIND SPEED OF 90MPH WITH A RECURRENCE INTERVAL OF 50YRS. USE THE FATIGUE CATEGORY AS NOTED ON EACH PROPOSED SIGNAL LAYOUT. FATIGUE LOADS ARE BASED ON THE REQUIREMENTS OF SECTION 11.7 AND THE FOLLOWING LOADS: GALLOPING - NO DESIGN NECESSARY. VIBRATION DAMPENERS SHALL BE USED ON ALL MAST ARMS 50' OR GREATER. VORTEX SHEDDING - NOT APPLICABLE ON TRAFFIC SIGNAL SUPPORTS WITH A TAPER OF AT LEAST 0.14 IN/FT.
NATURAL WIND GUST - THE YEARLY MEAN WIND SPEED FOR NATURAL WIND GUSTS SHALL BE 11.2MPH.
TRUCK INDUCED GUST - NO DESIGN NECESSARY.
THE TRAFFIC SIGNAL SUPPORT POLES SHALL BE POLES WITH CURVED MAST ARMS IN ACCORDANCE WITH MDPW 730-N POLE AND LIGHTING SPECIFICATIONS JANUARY 31, 2014. FOR POLE AND ARM DETAILS, AND TO CONFIRM DESIGN CRITERIA, CONTACT MIKE HIRTZER, METRO TRAFFIC ENGINEERING, 615-880-3261.

28. ALL OPEN CUTS AND TRENCH REPAIRS SHALL BE PERFORMED IN STRICT ACCORDANCE WITH CURRENT MDPW STANDARD DRAWINGS.

29. ALL SIDEWALK AND RAMP REPAIRS SHALL COMPLY WITH CURRENT MDPW STANDARD DRAWINGS.

30. ALL CONDUITS SHALL BE SCHEDULE 80 PVC UNLESS OTHERWISE NOTED. CONDUIT SHALL BE LAID AT A MINIMUM DEPTH OF 24 INCHES BELOW FINISHED GRADE AND SHALL COMPLY WITH TDOT TRENCHING DETAILS AND CONDUIT PLACEMENT. THE CONTRACTOR SHALL SEAL ALL OPEN CONDUIT ENTRANCE HOLES, WITH OR WITHOUT CABLES, WITH CONDUIT DUCT SEAL PUTTY OR CONDUIT PLUGS. WHERE CABLE ENTER THE CONDUIT, THE SEALANT SHALL BE APPLIED AFTER INSTALLING THE CABLE. THESE LOCATIONS SHALL CONSIST OF CONDUIT ENDS AND PULL BOXES, CABINET BASES AND WEATHER-HEADS.

31. THE PLAN SHEET HAVE BEEN DEVELOPED WITH EXISTING DATA AVAILABLE FROM MULTIPLE SURVEYS AND FIELD VISITS. ALL ITEMS INCLUDED AND SHOWN HEREIN ARE BELIEVED TO REFLECT EXISTING CONDITIONS TO A REASONABLE DEGREE OF ACCURACY. HOWEVER, THE CONTRACTOR HAS FINAL RESPONSIBILITY TO VERIFY ALL EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO, UNDERGROUND UTILITIES, PROPERTY LINES AND DRAINAGE STRUCTURES.

32. OPERATION OF EACH INTERNALLY ILLUMINATED STREET NAME SIGN SHALL BE CONTROLLED THROUGH THE USE OF A SINGLE PHOTO CELL (GRAINGER PART #K-4021 OR EQUIVALENT) LOCATED IN THE TOP OF THE CONTROLLER CABINET. INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE WIRED TO A SEPARATE 6 POSITION TERMINAL BLOCK AND A SEPARATE 6 POSITION GROUND BAR LOCATED IN THE CONTROLLER CABINET.

33. SIGNAL HEADS SHALL INCLUDE LOUVERED BACKPLATES WITH A 1" MINIMUM YELLOW RETRO REFLECTIVE BORDER AROUND THE PERIMETER OF THE FACE OF THE BACKPLATE. THE RETRO REFLECTIVE BORDER TO BE MADE OF A TYPE III PRISMATIC MATERIAL.

34. UTILITY MARKINGS SHALL BE CHALK BASED MARKING PAINT ON ASPHALT AND SIDEWALKS, AND REMOVED ONCE CONSTRUCTION IS COMPLETED.

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CHECKED BY:	BJT

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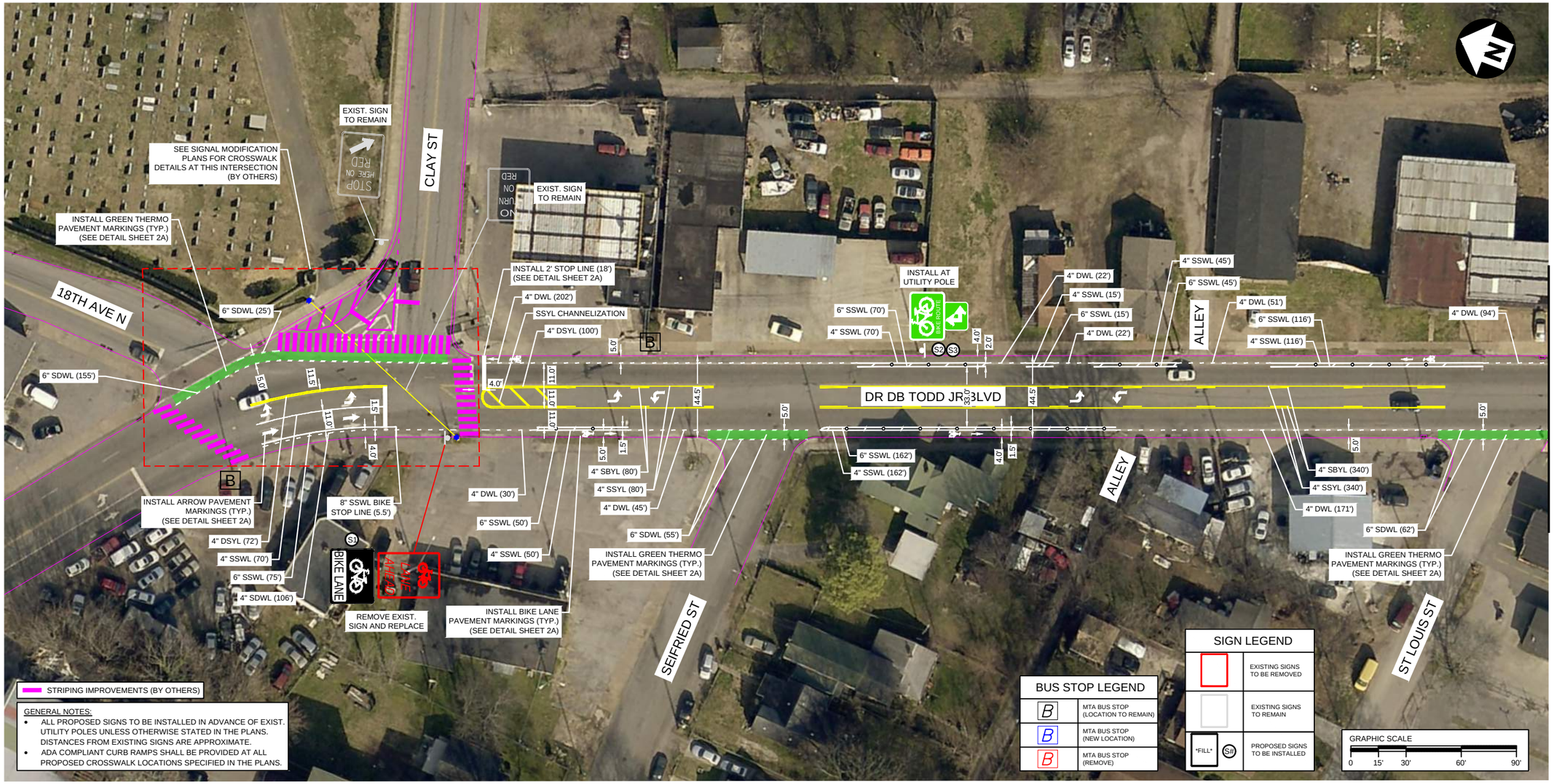
METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

ROADWAY / BIKE PLAN

Notes Sheet

SCALE: N.T.S.



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KCI TECHNOLOGIES

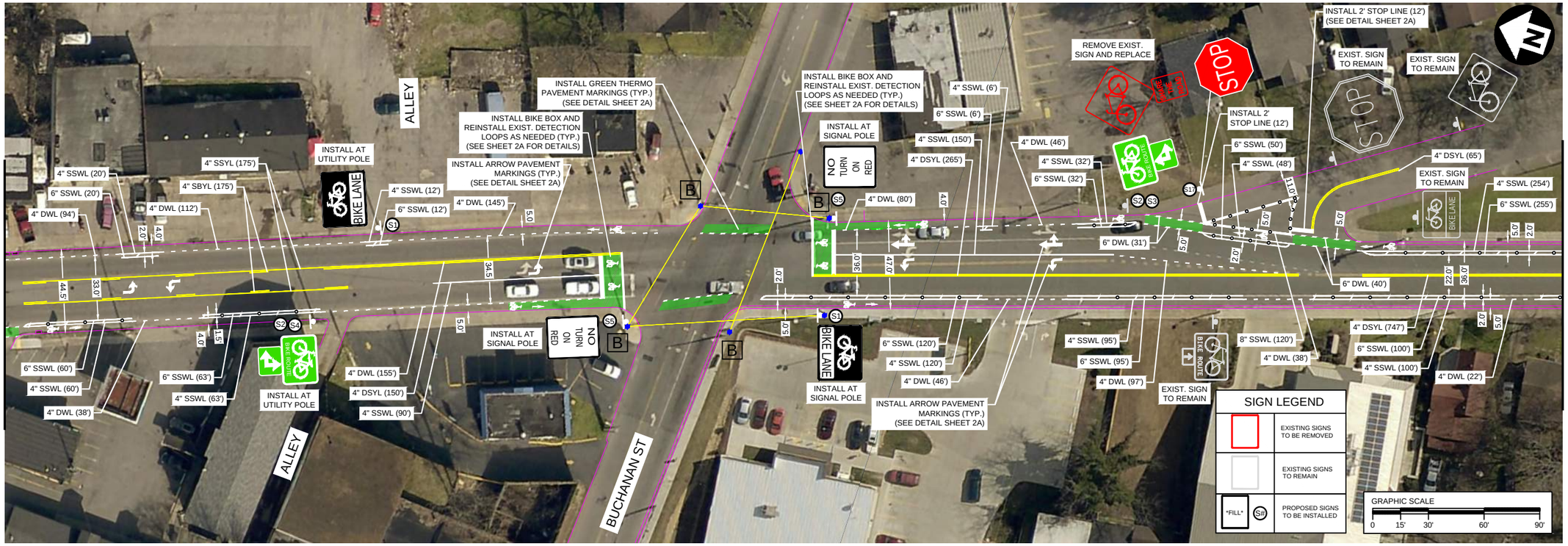
METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

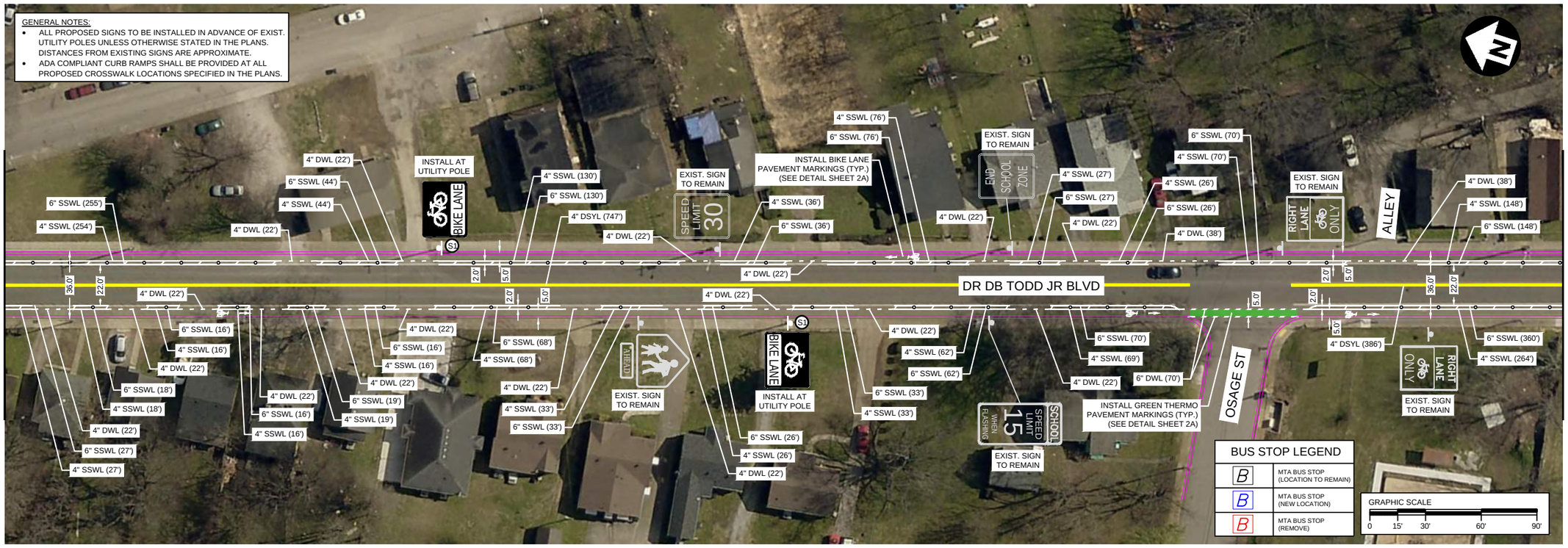
PROPOSED ROADWAY / BIKE PLAN

Proposed Pavement Marking and Signing Plan

SCALE: 1"=30'

SHEET 3 OF 10





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KCI TECHNOLOGIES

METROPOLITAN GOVERNMENT
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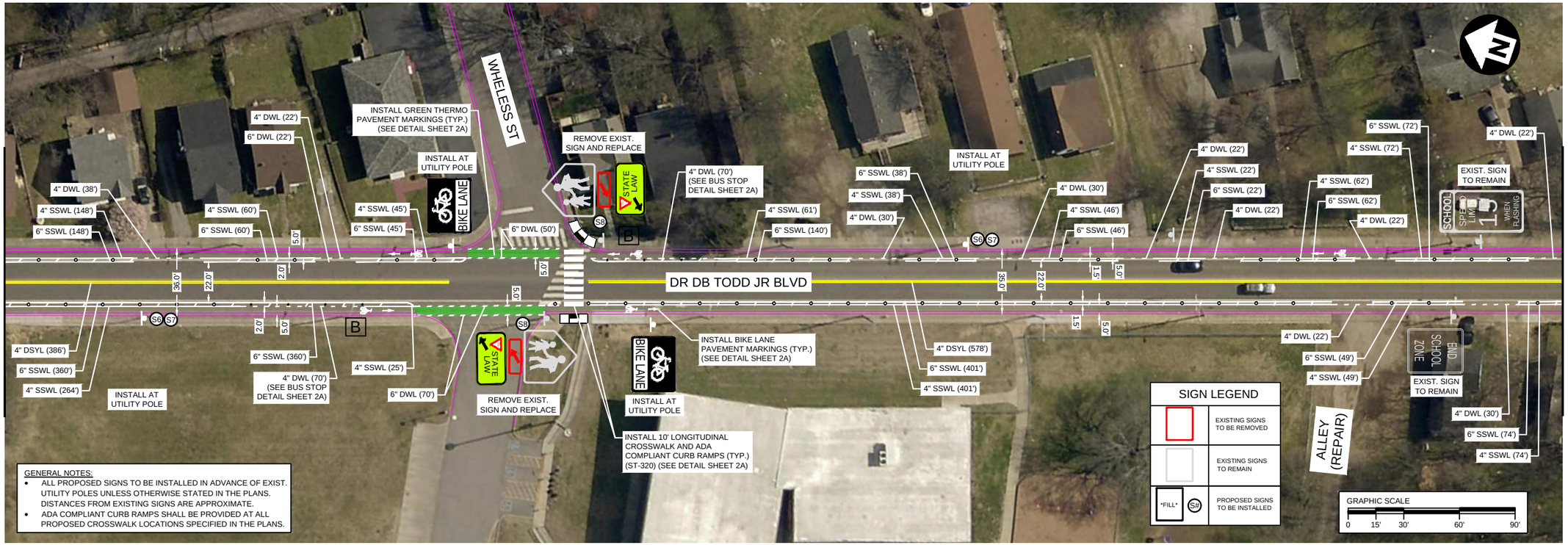
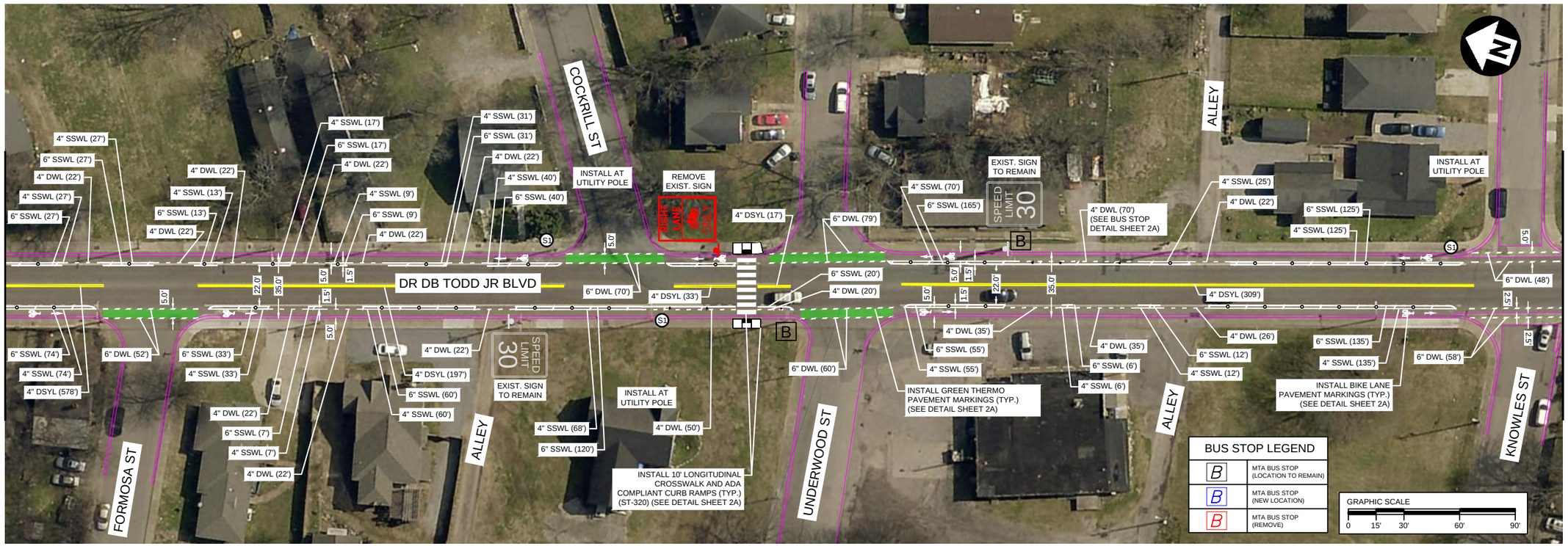
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

PROPOSED ROADWAY / BIKE PLAN

Proposed Pavement Marking and Signing Plan

SCALE: 1"=30'





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KCI TECHNOLOGIES

ALL CONSTRUCTION ACTIVITIES SHALL BE COMPLETED IN FULL COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD, FEDERAL REGISTER 36 CFR PARTS 1190 AND 1191, ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES, ARCHITECTURAL BARRIERS ACT (ABA) ACCESSIBILITY GUIDELINES, PROPOSED RULE. PUBLISHED IN THE FEDERAL REGISTER ON JULY 23, 2004, AS HAS BEEN ADOPTED BY METRO.

METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

PROPOSED ROADWAY / BIKE PLAN

Proposed Pavement Marking and Signing Plan

SCALE: 1"=30'

SEE SHEET 5

MATCH LINE

ALLEY

INSTALL GREEN THERMO PAVEMENT MARKINGS (TYP.) (SEE DETAIL SHEET 2A)

EXIST. SIGN TO REMAIN

EXIST. SIGNS TO REMAIN

INSTALL AT UTILITY POLE

REMOVE EXIST. SIGN AND REPLACE

INSTALL WORD PAVEMENT MARKINGS (TYP.) (SEE DETAIL SHEET 2A)

EXIST. SIGN TO REMAIN

EXIST. SIGN TO REMAIN

EXIST. SIGN TO REMAIN

4" SSWL (155')

6" SSWL (155')

6" SSWL (150')

4" SSWL (150')

4" DWL (22')

6" SSWL (304')

4" SSWL (302')

4" DSYL (340')

4" DWL (156')

4" SSWL (141')

6" SSWL (321')

6" DWL (45')

4" DSYL (321')

4" DWL (22')

6" DWL (30')

4" DSYL (282')

6" DWL (55')

4" DWL (22')

4" SSWL (142')

6" SSWL (142')

4" SSWL (60')

6" SSWL (60')

4" DWL (46')

6" SSWL (250')

4" SSWL (198')

INSTALL AT UTILITY POLE

6" SSWL (78')

4" SSWL (78')

4" DWL (22')

6" SSWL (39')

4" SSWL (39')

EXIST. SIGN TO REMAIN

INSTALL WORD PAVEMENT MARKINGS (TYP.) (SEE DETAIL SHEET 2A)

REMOVE EXIST. SIGN AND REPLACE

4" DWL (22')

4" SSWL (52')

6" SSWL (54')

INSTALL AT UTILITY POLE

ALLEY

EXIST. SIGN TO REMAIN

REMOVE EXIST. SIGN

4" SSWL (102')

6" SSWL (103')

HEIMAN ST

SCOVEL ST

GENERAL NOTES:

- ALL PROPOSED SIGNS TO BE INSTALLED IN ADVANCE OF EXIST. UTILITY POLES UNLESS OTHERWISE STATED IN THE PLANS. DISTANCES FROM EXISTING SIGNS ARE APPROXIMATE.
- ADA COMPLIANT CURB RAMPS SHALL BE PROVIDED AT ALL PROPOSED CROSSWALK LOCATIONS SPECIFIED IN THE PLANS.

BUS STOP LEGEND

B	MTA BUS STOP (LOCATION TO REMAIN)
B	MTA BUS STOP (NEW LOCATION)
B	MTA BUS STOP (REMOVE)

GRAPHIC SCALE

0 15' 30' 60' 90'

SEE THIS SHEET

MATCH LINE

SIGN LEGEND

	EXISTING SIGNS TO BE REMOVED
	EXISTING SIGNS TO REMAIN
FILL S#	PROPOSED SIGNS TO BE INSTALLED

REMOVE EXIST. SIGNS AND REPLACE

INSTALL ARROW PAVEMENT MARKINGS (TYP.) (SEE DETAIL SHEET 2A)

JEFFERSON ST

INSTALL SHARROW PAVEMENT MARKINGS (TYP.) (SEE DETAIL SHEET 2A)

INSTALL 10' LONGITUDINAL CROSSWALK AND ADA COMPLIANT CURB RAMPS AT INTERSECTION (TYP.) (ST-320) (SEE DETAIL SHEET 2A)

INSTALL 2' STOP LINE (20') (SEE DETAIL SHEET 2A)

INSTALL SHARROW PAVEMENT MARKINGS (TYP.) (SEE DETAIL SHEET 2A)

EXIST. SIGNS TO REMAIN

EXIST. SIGN TO REMAIN

INSTALL AT UTILITY POLE

INSTALL AT UTILITY POLE

6" SSWL (321')

4" SSWL (141')

4" DSYL (340')

6" DWL (50')

6" DWL (50')

4" SSWL (54')

4" DSYL (213')

4" SSWL (279')

6" SSWL (279')

4" SSWL (127')

6" SSWL (127')

4" DWL (30')

DR DB TODD JR BLVD

4" DWL (156')

6" SSWL (250')

4" SSWL (250')

4" SSWL (170')

6" DWL (76')

6" DWL (40')

INSTALL BIKE BOX (TYP.) (SEE SHEET 2A FOR DETAILS)

INSTALL 2' STOP LINE (10') (SEE DETAIL SHEET 2A)

6" SSWL (375')

4" SSWL (75')

INSTALL AT UTILITY POLE

ALLEY

4" SDWL (235')

4" DSYL (45')

4" SSWL (80')

EXIST. SIGN TO REMAIN

EXIST. SIGN TO REMAIN

INSTALL AT UTILITY POLE

6" SSWL (207')

4" SSWL (206')

REMOVE EXIST. SIGN AND REPLACE

SEE SIGNAL MODIFICATION SHEET FOR DETAILS AT THIS INTERSECTION

MEHARRY BLVD

GRAPHIC SCALE

0 15' 30' 60' 90'

SEE SHEET 7

MATCH LINE

FILE NO.	891704370.03
DATE:	9/21/18
DESIGNED BY:	JEG
DRAWN BY:	DKC
CHECKED BY:	BJT

REVISION BLOCK

DATE:		

KCI TECHNOLOGIES

ALL CONSTRUCTION ACTIVITIES SHALL BE COMPLETED IN FULL COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD, FEDERAL REGISTER 36 CFR PARTS 1190 AND 1191, ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES, ARCHITECTURAL BARRIERS ACT (ABA) ACCESSIBILITY GUIDELINES, PROPOSED RULE. PUBLISHED IN THE FEDERAL REGISTER ON JULY 23, 2004, AS HAS BEEN ADOPTED BY METRO.

METROPOLITAN GOVERNMENT

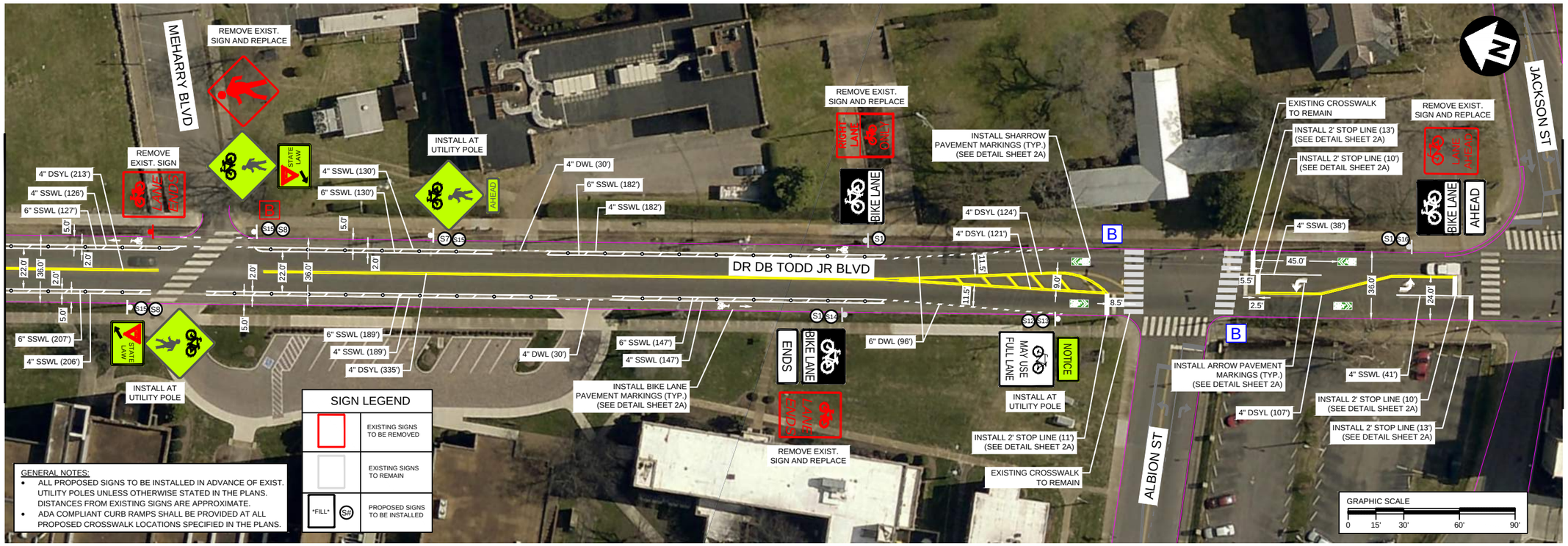
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

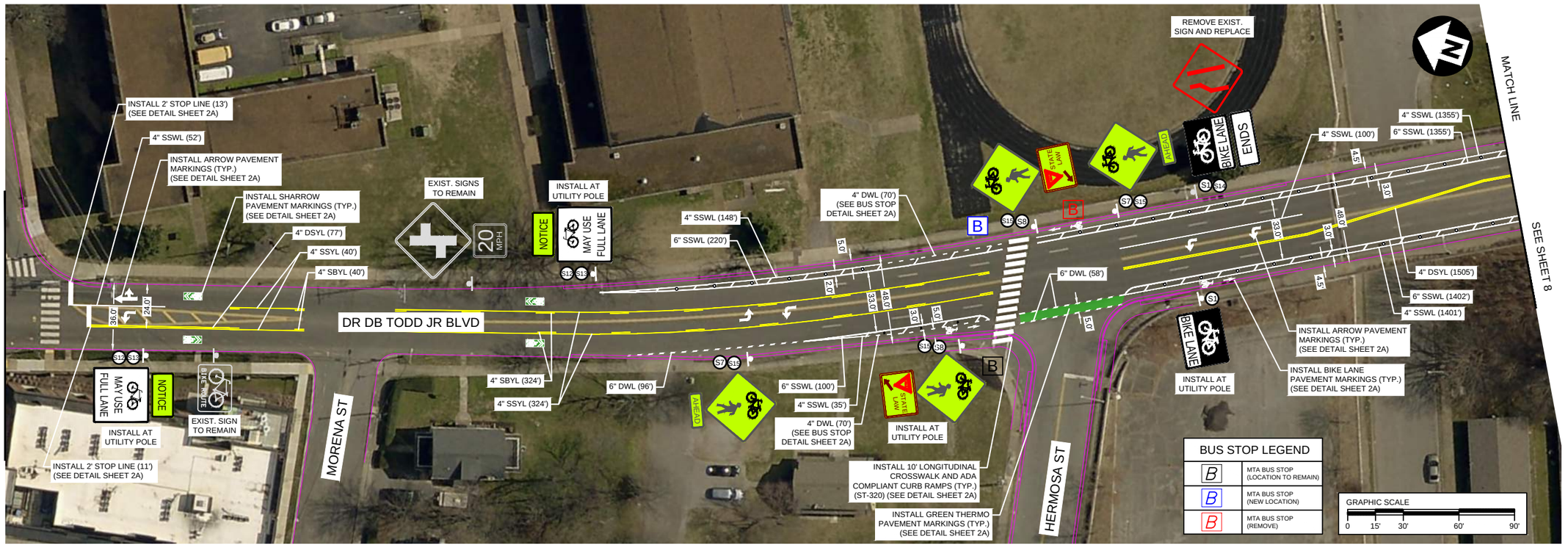
PROPOSED ROADWAY / BIKE PLAN

Proposed Pavement Marking and Signing Plan

SCALE: 1"=30'

SHEET 6 OF 10





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KCI TECHNOLOGIES

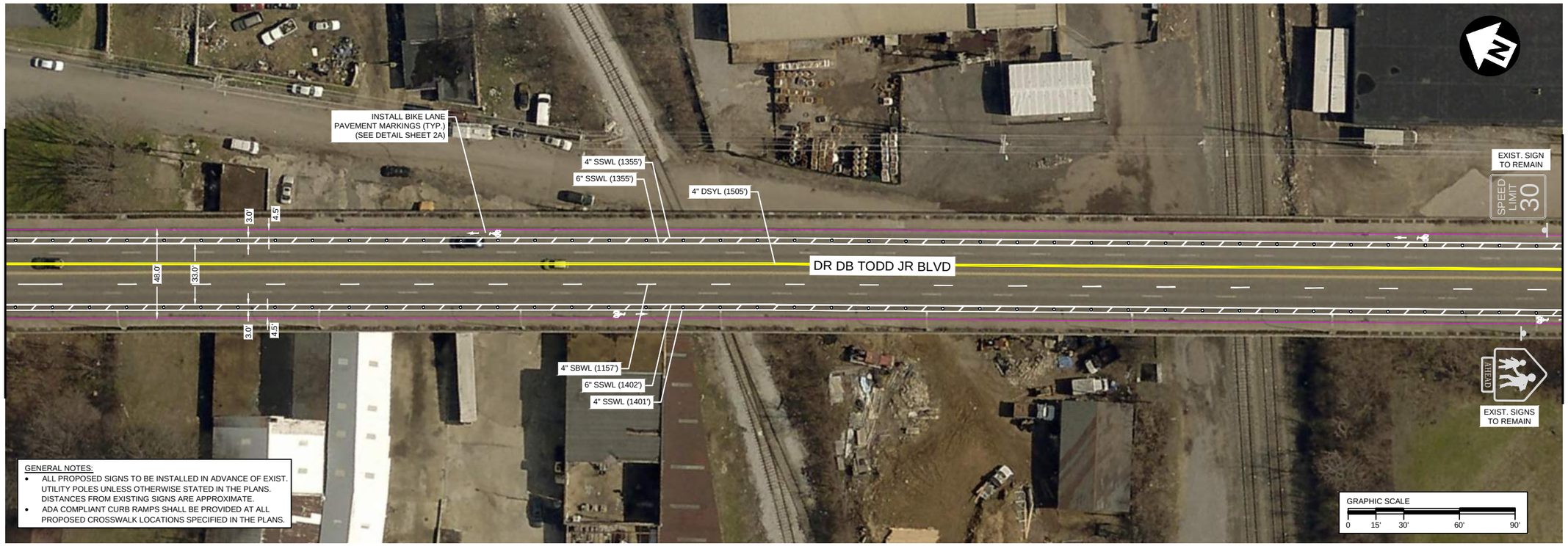
METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

PROPOSED ROADWAY / BIKE PLAN

Proposed Pavement Marking and Signing Plan

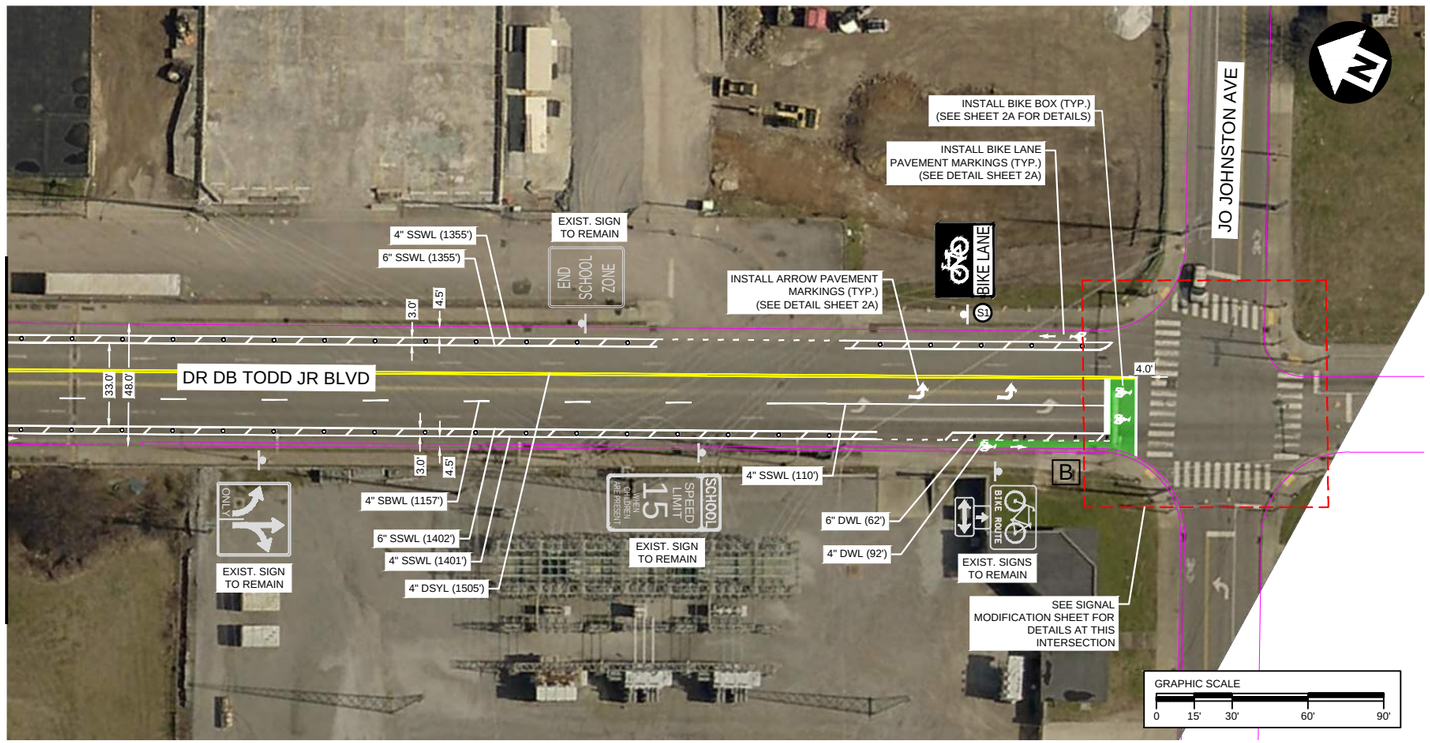
SCALE: 1"=30'

SHEET 7 OF 10



GENERAL NOTES:

- ALL PROPOSED SIGNS TO BE INSTALLED IN ADVANCE OF EXIST. UTILITY POLES UNLESS OTHERWISE STATED IN THE PLANS. DISTANCES FROM EXISTING SIGNS ARE APPROXIMATE.
- ADA COMPLIANT CURB RAMPS SHALL BE PROVIDED AT ALL PROPOSED CROSSWALK LOCATIONS SPECIFIED IN THE PLANS.



BUS STOP LEGEND	
B	MTA BUS STOP (LOCATION TO REMAIN)
B	MTA BUS STOP (NEW LOCATION)
B	MTA BUS STOP (REMOVE)

SIGN LEGEND	
	EXISTING SIGNS TO BE REMOVED
	EXISTING SIGNS TO REMAIN
FILL S#	PROPOSED SIGNS TO BE INSTALLED

FILE NO.	891704370.03
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KCI TECHNOLOGIES

METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

PROPOSED ROADWAY / BIKE PLAN

Proposed Pavement Marking and Signing Plan

SCALE: 1"=30'

SIGNAL HEAD DISPLAYS (EXIST.)

#1,3,5,7 #2,4,6,8

SIGNAL HEAD DISPLAYS (NEW)

18" / 16" MIN.

#P2,P4,P6,P8

COUNTDOWN TYPE
L.E.D PED WITH
OVERLAPPING
SOLID SYMBOLS

COLOR LEGEND
MAN – WHITE
HAND – PORTLAND ORANGE

PEDESTRIAN PUSHBUTTON ORIENTATION

POLE #3 (SIGNAL, EXIST)
ø4 SIGN S2
ø2 SIGN S1

POLE #4 (SIGNAL, EXIST)
ø8 SIGN S1
ø2 SIGN S2

ø6 SIGN S2
ø4 SIGN S1
POLE #2 (SIGNAL, EXIST)

ø6 SIGN S1
ø8 SIGN S2
POLE #1 (SIGNAL, EXIST)

NOTE:
REFER TO THIS DIAGRAM FOR PUSH BUTTON LOCATION AND ORIENTATION. PUSH BUTTONS SHOWN IN PLAN VIEW ARE FOR ILLUSTRATIVE PURPOSES ONLY.

N

D.B. TODD BLVD.

JEFFERSON STREET

1-7c (PED)
1-2csh (PPB)
(IN EXISTING CONDUIT)

POLE #4
(SIGNAL, EXIST.)

EXISTING PULL BOX (TYP.)

REMOVE EXISTING CURB RAMP AND INSTALL ADA COMPLIANT CURB RAMP WITH LEVEL LANDING AND TRUNCATED DONE WARNING MAT

EXISTING PULL BOX (TYP.)

1-7c (PED)
1-2csh (PPB)
(IN EXISTING CONDUIT)

POLE #3
(SIGNAL, EXIST.)

REMOVE EXISTING CURB RAMP AND INSTALL ADA COMPLIANT CURB RAMP WITH LEVEL LANDING AND TRUNCATED DONE WARNING MAT

2-7c (PED)
2-2csh (PPB)
(IN EXISTING CONDUIT)

REMOVE EXISTING CURB RAMP AND INSTALL ADA COMPLIANT CURB RAMP WITH LEVEL LANDING AND TRUNCATED DONE WARNING MAT

EXISTING TRAFFIC SIGNAL CONTROLLER CABINET

1-7c (PED)
1-2csh (PPB)
(IN EXISTING CONDUIT)

POLE #1
(SIGNAL, EXIST.)

4-7c (PED)
4-2csh (PPB)
(IN EXISTING CONDUIT)

EXISTING PULL BOX (TYP.)

EXISTING PULL BOX (TYP.)

1-7c (PED)
1-2csh (PPB)
(IN EXISTING CONDUIT)

POLE #2
(SIGNAL, EXIST.)

REMOVE EXISTING CURB RAMP AND INSTALL ADA COMPLIANT CURB RAMP WITH LEVEL LANDING AND TRUNCATED DONE WARNING MAT

1-7c (PED)
1-2csh (PPB)
(IN EXISTING CONDUIT)

TRAFFIC SIGNS (NEW)

R10-3E
10" X 15"
SIGN (S1)

R10-3E
10" X 15"
SIGN (S2)

NO TURN ON RED

R10-11A
30" X 36"
SIGN (S3)

PHASING DIAGRAM

ø1	ø2	ø3	ø4
ø5	ø6	ø7	ø8

PERMITTED, BUT NOT PROTECTED

RADAR DETECTOR ASSIGNMENT CHART

ZONE ASSIGNMENT	SIZE	RADAR	MODE	DISTANCE FROM STOP LINE	PHASE
R1–1	6'X50'	R3	PRESENCE	–5'	1
R3–1	6'X50'	R4	PRESENCE	–5'	3
R4–1	6'X50'	R2	PRESENCE	–5'	4
R5–1	6'X50'	R1	PRESENCE	–5'	5
R7–1	6'X50'	R2	PRESENCE	–5'	7
R8–1	6'X50'	R4	PRESENCE	–5'	8
R8–2	6'X50'	R4	PRESENCE	–5'	8

NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL EXISTING WIRING AND CONDUIT. NEW WIRING TO BE PROVIDED FOR NEW PEDESTRIAN SIGNALS AND PUSH BUTTONS AS NEEDED, AS SHOWN.
2. CONTRACTOR IS REPOSIBLE FOR REMOVING AND REPLACING PUSH BUTTON SIGNS ON EXISTING SIGNAL POLES.
3. SEE BIKE PLANS BY KCI TECHNOLOGIES FOR DETAILS ON PAVEMENT MARKINGS.

LEGEND

	SIGNAL HEAD W/ NUMBER (EXIST.)
	METAL SIGNAL POLE (EXIST.)
	PULL BOX (EXIST.)
	POLE MOUNTED TRAFFIC SIGNAL CONTROLLER (EXIST.)
	UNDERGROUND CONDUIT (EXIST.)
	PEDESTRIAN SIGNAL HEAD W/ NUMBER (NEW)
	TRUNCATED DOME WARNING MAT (NEW)
	PEDESTRIAN PUSH BUTTON W/ SIGN (NEW)
	OVERHEAD SIGN (NEW)
RJ	RADAR DETECTION UNIT W/ NUMBER (NEW)
RX=1	6'X50' RADAR DETECTION ZONE (NEW)

CALL BEFORE YOU DIG 1-800-351-1111 TENNESSEE ONE CALL SYSTEM

0' 20' 40' 60'

FILE NO.	1704370.03
DATE:	09/21/18
DESIGNED BY:	BJT
DRAWN BY:	JDE
CHECKED BY:	BJT

REVISION BLOCK

DATE:		

ACCEPTED BY : _____

DATE : _____

APPROVAL OF THIS TRAFFIC SIGNAL PLAN DESIGNATES APPROVAL OF THE DESIGN ONLY. APPROVAL OF THE DESIGN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO OBTAIN THE APPROPRIATE PERMITS IN ORDER TO INSTALL THE TRAFFIC SIGNAL.

METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

INTERSECTION NO. 2240

TRAFFIC SIGNAL PLAN

D.B. TODD BLVD. AND JEFFERSON STREET

SCALE: 1"=20'

SHEET 9 OF 10

TRAFFIC SIGNAL NOTES

1. ALL CONSTRUCTION, EQUIPMENT, AND INSTALLATION PROCEDURES SHALL COMPLY WITH THE TENNESSEE DEPARTMENT OF TRANSPORTATION (TDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SIGNAL INSTALLATION AND EQUIPMENT SHALL COMPLY WITH SECTION 730N–TRAFFIC SIGNALS (MARCH 1, 2015). ALL PAVEMENT MARKINGS SHALL COMPLY WITH SECTION 716–PAVEMENT MARKINGS.

2. THE CONTRACTOR SHALL SUBMIT A MATERIALS LIST TO MDPW FOR REVIEW AND APPROVAL PRIOR TO START OF CONSTRUCTION (CONTACT: MIKE HIRTZER, METRO TRAFFIC ENGINEERING, 615–880–3261).

3. INITIAL SIGNAL TIMINGS ARE TO BE PROVIDED BY MDPW. THE CONTRACTOR SHALL NOTIFY MDPW A MINIMUM OF THIRTY (30) DAYS PRIOR TO ACTIVATION OF THE TRAFFIC SIGNAL.

4. CONSTRUCT THE CONTROLLER CABINET AND FOUNDATION IN ACCORDANCE WITH TDOT STANDARD DRAWINGS. AN APPROPRIATE CABINET AND FOUNDATION SHALL BE INSTALLED PER MDPW SPECIFICATIONS: TYPE IV 55" X 44" X 26" ALUMINUM TYPE IV–C 50" X 36" X 17¾" ELECTROSTATIC PAINTED BLACK.

5. THE CONTRACTOR SHALL CONNECT THE EXISTING SIGNAL COMMUNICATIONS CABLE TO THE NEW TRAFFIC SIGNAL CONTROLLER CABINET. THE CONNECTION SHALL BE MADE BY SPLICING THE EXISTING CABLE IN A MANNER ACCEPTABLE TO MDPW. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH MDPW AND RECEIVE MDPW APPROVAL PRIOR TO SPLICING THE EXISTING CABLE.

6. ALL UTILITY LOCATIONS, AS SHOWN, ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY. SOME UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1–800–351–1111.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ELECTRICAL SERVICE TO THE SITE.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL UTILITIES FOR ANY "MAKE READY" WORK REQUIRED. MDPW SHALL BE RESPONSIBLE FOR THE ACTUAL COST OF "MAKE READY" WORK.

9.A CONTRACTOR SHALL INSTALL A 50 AMP, 2 POLE WEATHERPROOF EXTERNAL DISCONNECT ON THE POLE WITH A/C SERVICE CONNECTION. ENCLOSURE SHALL BE METALLIC WITH A 50 AMP SINGLE POLE CIRCUIT BREAKER.

9.B CONTRACTOR SHALL INSTALL UNDERGROUND ELECTRIC SERVICE CONNECTION IN A TYPE B PULL BOX LABELED "TRAFFIC SIGNAL". PULL BOX SHALL HAVE A 30 AMP KTK FUSE AND WATER PROOF FUSE HOLDER WITH #6 AWG WIRES COLOR CODED BLACK, WHITE, AND GREEN. POWER SERVICE SHOULD BE INSTALLED IN A 2" CONDUIT FROM NES VAULT TO CONTROLLER CABINET.

10. VEHICLE DETECTION LOOPS SHALL MEASURE 6' X 45' QUADRAPOLE LOOPS WITH TWO TURNS OF WIRE, UNLESS SPECIFIED OTHERWISE. LOOPS SHALL BE CENTERED IN THE TRAVEL LANES. LOOPS SHALL BE INSTALLED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND MDPW LOOP SPECIFICATIONS, UNLESS OTHERWISE NOTED.

11. ALL EQUIPMENT NECESSARY FOR VIDEO DETECTION SHALL BE FURNISHED BY THE CONTRACTOR AND INSTALLED IN THE CABINET. MOUNTING HARDWARE SHALL BE OF THE ASTRO BRACKET TYPE WITH A MINIMUM HEIGHT ADJUSTMENT OF 6 FT.

12. ALL FOUNDATIONS SHALL HAVE A SPARE 2–INCH STUBOUT PARALLEL TO THE ROAD (POLES AND CONTROLLER).

13. THE PROPOSED LOCATIONS FOR THE SIGNAL SUPPORT POLES, AS SHOWN ON THESE PLANS, ARE APPROXIMATE. SOME FIELD ADJUSTMENT MAY BE REQUIRED IN ORDER TO AVOID CONFLICT WITH EITHER OVERHEAD OR UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND STAKING THE OPTIMUM LOCATIONS FOR THESE POLES AND FOR RECEIVING APPROVAL FROM THE ENGINEER AND THE APPROPRIATE UTILITIES BEFORE INSTALLATION BEGINS. PROPER ROADSIDE CLEAR ZONES SHALL BE OBSERVED.

14. SHAFTS FOR FOOTINGS SHALL BE DRILLED THROUGH FIRM, UNDISTURBED, UNSATURATED SOIL AND SHALL BE VISUALLY INSPECTED BY THE ENGINEER OR ENGINEERING REPRESENTATIVE PRIOR TO PLACEMENT OF REINFORCEMENT. THE ENGINEER OR ENGINEERING REPRESENTATIVE SHALL BE ADVISED BY THE CONTRACTOR OF ANY GROUND WATER OR LOOSE SOIL ENCOUNTERED DURING DRILLING. FOOTINGS SHALL COMPLY WITH TDOT STANDARD DRAWINGS.

15. SIGNAL HEADS VISIBLE TO DRIVERS BUT NOT OPERATIONAL SHALL BE COMPLETELY COVERED.

16. SIGNAL HEADS SHALL FLASH A MINIMUM OF SEVEN (7) DAYS PRIOR TO ACTIVATION OF THE TRAFFIC SIGNAL, UNLESS OTHERWISE SPECIFIED BY MDPW TRAFFIC ENGINEER.

17. IF FIELD ADJUSTMENTS RESULT IN CHANGES TO SIGNAL HEAD PLACEMENT, ATTACHMENT HEIGHTS, OR SPAN WIRE/MAST ARM LENGTH, THE ENGINEER SHALL BE ADVISED AND SHOP DRAWINGS SHALL BE RE–EVALUATED TO VERIFY THAT THE CHANGES ARE STRUCTURALLY ACCEPTABLE.

18. ALL STOP LINES, CROSSWALK LINES, LANE LINES, AND PAVEMENT ARROWS SHALL BE THERMOPLASTIC. STOP LINES SHALL BE 24 INCHES WIDE. ALL CONFLICTING MARKINGS SHALL BE REMOVED USING AN ACCEPTABLE METHOD AS SPECIFIED BY TDOT SPECIFICATION SECTION 712–TEMPORARY TRAFFIC CONTROL. EXISTING PAVEMENT MARKINGS SHALL BE REAPPLIED AS NECESSARY.

19. STREET NAME SIGNS ARE TO BE PROVIDED BY MDPW AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED. CONTACT MDPW SIGN SHOP A MINIMUM OF THIRTY (30) DAYS PRIOR TO EXPECTED SIGN INSTALLATION DATE FOR SIGN PREPARATION.

20. ALL ITEMS INSTALLED WITHIN THE PEDESTRIAN PATH OF TRAVEL (I.E. SIDEWALK) SHALL MEET THE METRO PUBLIC WORKS STANDARD DETAILS. THIS INCLUDES A MINIMUM PATH OF TRAVEL WIDTH OF 60" AND A PROTRUDING OBJECT LIMIT OF 4" IF MOUNTED AT A HEIGHT BETWEEN 27" AND 80" AND WITHIN THE PATH OF TRAVEL. VARIANCES MUST BE APPROVED BY MDPW.

21. EXISTING SIGNAL EQUIPMENT TO BE REMOVED BY THE CONTRACTOR. ALL SALVAGED EQUIPMENT TO BE RETURNED TO MDPW.

22. EXISTING SIGNAL EQUIPMENT SHALL REMAIN IN OPERATION UNTIL NEW SIGNAL EQUIPMENT IS COMPLETE AND IN FULL OPERATION.

23. ALL NEW SIGNAL HEADS SHALL BE FABRICATED FROM ALUMINUM. ALL NEW SIGNAL HEADS SHALL BE LED TYPE, GELCORE OR METRO APPROVED ALTERNATE. SIGNAL HEAD EQUIPMENT (I.E. FRAME AND ILLUMINATION TYPE) SHALL BE APPROVED BY MDPW PRIOR TO INSTALLATION. ATTACHMENT TO BE WITH "ASTRO" BRACKETS.

24. CABINET AND CONTROLLER MUST HAVE ALL EQUIPMENT NECESSARY TO PROVIDE SIGNAL COMMUNICATION VIA PHONE DROP. THIS INCLUDES 1" RISER WITH PULL LINE. THIS DOES NOT INCLUDE THE INSTALLATION OF THE PHONE LINE ITSELF.

25. CABINET/CONTROLLER TO INCLUDE COORDINATION MODULE, ETHERNET PORT, COMMUNICATIONS PANEL AND OTHER CABINET WIRING AS REQUIRED FOR SYSTEM OPERATION. CONTROLLER TO BE COMPATIBLE WITH EXISTING MDPW CLOSED LOOP SOFTWARE MATS OR AIRES UNLESS OTHERWISE SPECIFIED.

26. ALL CONSTRUCTION ACTIVITIES SHALL BE COMPLETED IN FULL COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD, FEDERAL REGISTER 36 CFR PARTS 1190 AND 1191, ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES; ARCHITECTURAL BARRIERS ACT (ABA) ACCESSIBILITY GUIDELINES; PROPOSED RULE, PUBLISHED IN THE FEDERAL REGISTER ON JULY 23, 2004, AS HAS BEEN ADOPTED BY METRO.

27. TRAFFIC SIGNAL SUPPORT POLES SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS LUMINAIRES, AND TRAFFIC SIGNALS (CURRENT EDITION WITH ADDENDA). WIND LOADS SHALL BE BASED ON A BASIC WIND SPEED OF 90MPH WITH A RECURRENCE INTERVAL OF 50YRS. USE THE FATIGUE CATEGORY AS NOTED ON EACH PROPOSED SIGNAL LAYOUT. FATIGUE LOADS ARE BASED ON THE REQUIREMENTS OF SECTION 11.7 AND THE FOLLOWING LOADS:
GALLOPING – NO DESIGN NECESSARY. VIBRATION DAMPENERS SHALL BE USED ON ALL MAST ARMS 50' OR GREATER.
VORTEX SHEDDING – NOT APPLICABLE ON TRAFFIC SIGNAL SUPPORTS WITH A TAPER OF AT LEAST 0.14 IN/FT.
NATURAL WIND GUST – THE YEARLY MEAN WIND SPEED FOR NATURAL WIND GUSTS SHALL BE 11.2MPH.
TRUCK INDUCED GUST – NO DESIGN NECESSARY.
THE TRAFFIC SIGNAL SUPPORT POLES SHALL BE POLES WITH CURVED MAST ARMS IN ACCORDANCE WITH MDPW 730–N POLE AND LIGHTING SPECIFICATIONS JANUARY 31, 2014. FOR POLE AND ARM DETAILS, AND TO CONFIRM DESIGN CRITERIA, CONTACT MIKE HIRTZER, METRO TRAFFIC ENGINEERING, 615–880–3261.

28. ALL OPEN CUTS AND TRENCH REPAIRS SHALL BE PERFORMED IN STRICT ACCORDANCE WITH CURRENT MDPW STANDARD DRAWINGS.

29. ALL SIDEWALK AND RAMP REPAIRS SHALL COMPLY WITH CURRENT MDPW STANDARD DRAWINGS.

30. ALL CONDUITS SHALL BE SCHEDULE 80 PVC UNLESS OTHERWISE NOTED. CONDUIT SHALL BE LAID AT A MINIMUM DEPTH OF 24 INCHES BELOW FINISHED GRADE AND SHALL COMPLY WITH TDOT TRENCHING DETAILS AND CONDUIT PLACEMENT. THE CONTRACTOR SHALL SEAL ALL OPEN CONDUIT ENTRANCE HOLES, WITH OR WITHOUT CABLES, WITH CONDUIT DUCT SEAL PUTTY OR CONDUIT PLUGS. WHERE CABLE ENTER THE CONDUIT, THE SEALANT SHALL BE APPLIED AFTER INSTALLING THE CABLE. THESE LOCATIONS SHALL CONSIST OF CONDUIT ENDS AND PULL BOXES, CABINET BASES AND WEATHER–HEADS.

31. THE PLAN SHEET HAVE BEEN DEVELOPED WITH EXISTING DATA AVAILABLE FROM MULTIPLE SURVEYS AND FIELD VISITS. ALL ITEMS INCLUDED AND SHOWN HEREIN ARE BELIEVED TO REFLECT EXISTING CONDITIONS TO A REASONABLE DEGREE OF ACCURACY. HOWEVER, THE CONTRACTOR HAS FINAL RESPONSIBILITY TO VERIFY ALL EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO, UNDERGROUND UTILITIES, PROPERTY LINES AND DRAINAGE STRUCTURES.

32. OPERATION OF EACH INTERNALLY ILLUMINATED STREET NAME SIGN SHALL BE CONTROLLED THROUGH THE USE OF A SINGLE PHOTO CELL (GRAINGER PART #K–4021 OR EQUIVALENT) LOCATED IN THE TOP OF THE CONTROLLER CABINET. INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE WIRED TO A SEPARATE 6 POSITION TERMINAL BLOCK AND A SEPARATE 6 POSITION GROUND BAR LOCATED IN THE CONTROLLER CABINET.

33. SIGNAL HEADS SHALL INCLUDE LOUVERED BACKPLATES WITH A 1" MINIMUM YELLOW RETRO REFLECTIVE BORDER AROUND THE PERIMETER OF THE FACE OF THE BACKPLATE. THE RETRO REFLECTIVE BORDER TO BE MADE OF A TYPE III PRISMATIC MATERIAL.

34. UTILITY MARKINGS SHALL BE CHALK BASED MARKING PAINT ON ASPHALT AND SIDEWALKS, AND REMOVED ONCE CONSTRUCTION IS COMPLETED.

ESTIMATED SIGNAL QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
712-99.92	TRAFFIC CONTROL (POLICE OFFICER)	HR	120
713-16.22	SIGNS (30"X36" ALUMINUM FLAT SHEET)	EACH	1
717-01	MOBILIZATION	LS	1
725-03.50	RADAR DETECTION SYSTEM	LS	1
730-08.03	SIGNAL CABLE - 7 CONDUCTOR	L.F.	400
730-14.01	SHIELDED DETECTOR CABLE	L.F.	400
730-26.02	PEDESTRIAN PUSHBUTTON WITH 15" SIGN	EACH	8
730-26.05	COUNTDOWN PEDESTRIAN SIGNAL	EACH	8

ESTIMATED ROADWAY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
202-03	REMOVAL OF RIGID PAVEMENT, SIDEWALK, ETC.	SY	75
202-08.15	REMOVAL OF CURB & GUTTER	L.F.	125
701-02.03	CONCRETE CURB RAMP	SF	400
702-03	COMBINED CURB & GUTTER	C.Y.	15
PW-DW-001	DETECTABLE WARNINGS (SPECIFICATION 02523) (ST-329, ST-330)	SF	75

FILE NO.	1704370.03
DATE:	09/21/18
DESIGNED BY:	BJT
DRAWN BY:	JDE
CHECKED BY:	BJT

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METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

INTERSECTION NO. 2240

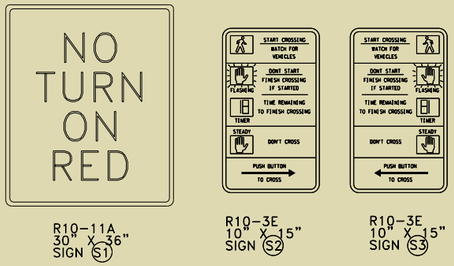
TRAFFIC SIGNAL NOTES, DETAILS and QUANTITIES

DB TODD AND JEFFERSON STREET

SCALE: N.T.S.

SIGNAL HEAD DISPLAYS (EXIST.)

TRAFFIC SIGN (NEW)

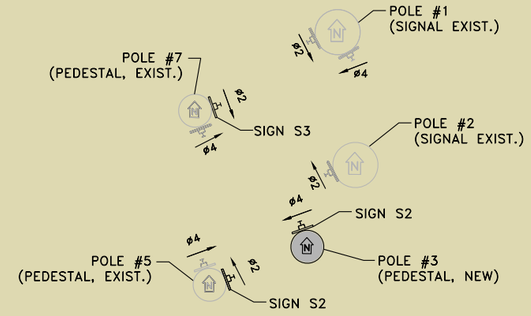


PHASING DIAGRAM

ø1	ø2	ø3 NOT USED	ø4
ø5 NOT USED	ø6 NOT USED	ø7 NOT USED	ø8 NOT USED

PERMITTED, BUT NOT PROTECTED

PEDESTRIAN PUSHBUTTON ORIENTATION (NEW)



NOTE:
REFER TO THIS DIAGRAM FOR PUSH BUTTON LOCATION AND ORIENTATION. PUSH BUTTONS SHOWN IN PLAN VIEW ARE FOR ILLUSTRATIVE PURPOSES ONLY.

D.B. TODD BLVD.

JO JOHNSTON AVENUE

N

POLE #1 (SIGNAL, EXIST.)
3-RADAR
1-7c (PED)
3-2csh (PPB)
1-RADAR
(IN EXISTING CONDUIT)

POLE #2 (SIGNAL, EXIST.)
REMOVE EXISTING PUSHBUTTON AND PEDESTRIAN SIGNAL HEAD FOR CROSSING D.B. TODD BLVD
1-2"C
1-7c (PED)
1-2csh (PPB)

POLE #3 (PEDESTAL, NEW) (HEAD P4 TO BE RELOCATED FROM POLE #2)

POLE #4 (SIGNAL, EXIST.)
REMOVE EXISTING PUSHBUTTON
2-2csh (PPB) (IN EXISITING CONDUIT)

POLE #5 (PEDESTAL, EXIST.)
1-2csh (PPB) (IN EXISTING CONDUIT)

POLE #6 (SIGNAL, EXIST.)
1-2csh (PPB) (IN EXISTING CONDUIT)
REMOVE EXISTING PUSHBUTTON

POLE #7 (PEDESTAL, EXIST.)
1-2csh (PPB) (IN EXISTING CONDUIT)

SIGNAL SUPPORT POLE DATA (NEW)

POLE NO.	POLE TYPE	HEIGHT	MAST ARM LENGTH	ATTACHMENT HEIGHT	EMBEDDED/ FOOTING DEPTH
3	PEDESTAL	10'-0"	–	–	3'-0"

NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL EXISTING WIRING. NEW WIRING TO BE PROVIDED FOR NEW PEDESTRIAN SIGNALS AND PUSH BUTTONS AS NEEDED, AS SHOWN.
2. REFER TO PLANS BY KCI TECHNOLOGIES FOR ADDITIONAL DETAILS ON BIKE LANE PLANS.

RADAR DETECTOR ASSIGNMENT CHART

ZONE ASSIGNMENT	SIZE	RADAR	MODE	DISTANCE FROM STOP LINE	PHASE
R1-1	6'X50'	R3	PRESENCE	-5'	1
R2-1	6'X50'	R2	PRESENCE	-5'	2
R2-2	6'X50'	R2	PRESENCE	-5'	2
R2-3	6'X50'	R3	PRESENCE	-5'	2
R4-1	6'X50'	R1	PRESENCE	-5'	4
R4-2	6'X50'	R1	PRESENCE	-5'	4
R4-3	6'X50'	R4	PRESENCE	-5'	4
R4-4	6'X50'	R4	PRESENCE	-5'	4

LEGEND

	SIGNAL HEAD W/ NUMBER (EXIST.)
	SIGNAL POLE w/MAST ARM (EXIST.)
	PEDESTAL POLE (EXIST.)
	POLE MOUNTED TRAFFIC SIGNAL CONTROLLER (EXIST.)
	OVERHEAD SIGN (NEW)
	PEDESTAL POLE (NEW)
	PEDESTRIAN PUSH BUTTON W/ SIGN (NEW)
	PEDESTRIAN SIGNAL HEAD (EXIST)
	PULL BOX (EXIST.)
R#	RADAR DETECTION UNIT W/ NUMBER (NEW)
RX-1	6'X50' RADAR DETECTION ZONE (NEW)

CALL BEFORE YOU DIG 1-800-351-1111 TENNESSEE ONE CALL SYSTEM

0' 20' 40' 60'

FILE NO.	1704370.03
DATE:	09/21/18
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DRAWN BY:	JDE
CHECKED BY:	BJT

REVISION BLOCK

DATE:		

ACCEPTED BY : _____

DATE : _____

APPROVAL OF THIS TRAFFIC SIGNAL PLAN DESIGNATES APPROVAL OF THE DESIGN ONLY. APPROVAL OF THE DESIGN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO OBTAIN THE APPROPRIATE PERMITS IN ORDER TO INSTALL THE TRAFFIC SIGNAL.

METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

INTERSECTION NO. 2245

TRAFFIC SIGNAL PLAN

D.B. TODD BLVD. AND JO JOHNSTON AVENUE

SCALE: 1"=20'

SHEET 10 OF 10

TRAFFIC SIGNAL NOTES

1. ALL CONSTRUCTION, EQUIPMENT, AND INSTALLATION PROCEDURES SHALL COMPLY WITH THE TENNESSEE DEPARTMENT OF TRANSPORTATION (TDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SIGNAL INSTALLATION AND EQUIPMENT SHALL COMPLY WITH SECTION 730N–TRAFFIC SIGNALS (MARCH 1, 2015). ALL PAVEMENT MARKINGS SHALL COMPLY WITH SECTION 716–PAVEMENT MARKINGS.

2. THE CONTRACTOR SHALL SUBMIT A MATERIALS LIST TO MDPW FOR REVIEW AND APPROVAL PRIOR TO START OF CONSTRUCTION (CONTACT: MIKE HIRTZER, METRO TRAFFIC ENGINEERING, 615–880–3261).

~~3. INITIAL SIGNAL TIMINGS ARE TO BE PROVIDED BY MDPW. THE CONTRACTOR SHALL NOTIFY MDPW A MINIMUM OF THIRTY (30) DAYS PRIOR TO ACTIVATION OF THE TRAFFIC SIGNAL.~~

~~4. CONSTRUCT THE CONTROLLER CABINET AND FOUNDATION IN ACCORDANCE WITH TDOT STANDARD DRAWINGS. AN APPROPRIATE CABINET AND FOUNDATION SHALL BE INSTALLED PER MDPW SPECIFICATIONS: TYPE IV 55" X 44" X 26" ALUMINUM TYPE IV–C 50" X 36" X 17¾" ELECTROSTATIC PAINTED BLACK.~~

~~5. THE CONTRACTOR SHALL CONNECT THE EXISTING SIGNAL COMMUNICATIONS CABLE TO THE NEW TRAFFIC SIGNAL CONTROLLER CABINET. THE CONNECTION SHALL BE MADE BY SPLICING THE EXISTING CABLE IN A MANNER ACCEPTABLE TO MDPW. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH MDPW AND RECEIVE MDPW APPROVAL PRIOR TO SPLICING THE EXISTING CABLE.~~

6. ALL UTILITY LOCATIONS, AS SHOWN, ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY. SOME UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1–800–351–1111.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ELECTRICAL SERVICE TO THE SITE.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL UTILITIES FOR ANY "MAKE READY" WORK REQUIRED. MDPW SHALL BE RESPONSIBLE FOR THE ACTUAL COST OF "MAKE READY" WORK.

~~9.A CONTRACTOR SHALL INSTALL A 50 AMP, 2 POLE WEATHERPROOF EXTERNAL DISCONNECT ON THE POLE WITH A/C SERVICE CONNECTION. ENCLOSURE SHALL BE METALLIC WITH A 50 AMP SINGLE POLE CIRCUIT BREAKER.~~

~~9.B CONTRACTOR SHALL INSTALL UNDERGROUND ELECTRIC SERVICE CONNECTION IN A TYPE B PULL BOX LABELED "TRAFFIC SIGNAL". PULL BOX SHALL HAVE A 30 AMP KTK FUSE AND WATER PROOF FUSE HOLDER WITH #6 AWG WIRES COLOR CODED BLACK, WHITE, AND GREEN. POWER SERVICE SHOULD BE INSTALLED IN A 2" CONDUIT FROM NES VAULT TO CONTROLLER CABINET.~~

~~10. VEHICLE DETECTION LOOPS SHALL MEASURE 6' X 45' QUADRAPOLE LOOPS WITH TWO TURNS OF WIRE, UNLESS SPECIFIED OTHERWISE. LOOPS SHALL BE CENTERED IN THE TRAVEL LANES. LOOPS SHALL BE INSTALLED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND MDPW LOOP SPECIFICATIONS, UNLESS OTHERWISE NOTED.~~

~~11. ALL EQUIPMENT NECESSARY FOR VIDEO DETECTION SHALL BE FURNISHED BY THE CONTRACTOR AND INSTALLED IN THE CABINET. MOUNTING HARDWARE SHALL BE OF THE ASTRO BRACKET TYPE WITH A MINIMUM HEIGHT ADJUSTMENT OF 6 FT.~~

12. ALL FOUNDATIONS SHALL HAVE A SPARE 2–INCH STUBOUT PARALLEL TO THE ROAD (POLES AND CONTROLLER).

13. THE PROPOSED LOCATIONS FOR THE SIGNAL SUPPORT POLES, AS SHOWN ON THESE PLANS, ARE APPROXIMATE. SOME FIELD ADJUSTMENT MAY BE REQUIRED IN ORDER TO AVOID CONFLICT WITH EITHER OVERHEAD OR UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND STAKING THE OPTIMUM LOCATIONS FOR THESE POLES AND FOR RECEIVING APPROVAL FROM THE ENGINEER AND THE APPROPRIATE UTILITIES BEFORE INSTALLATION BEGINS. PROPER ROADSIDE CLEAR ZONES SHALL BE OBSERVED.

14. SHAFTS FOR FOOTINGS SHALL BE DRILLED THROUGH FIRM, UNDISTURBED, UNSATURATED SOIL AND SHALL BE VISUALLY INSPECTED BY THE ENGINEER OR ENGINEERING REPRESENTATIVE PRIOR TO PLACEMENT OF REINFORCEMENT. THE ENGINEER OR ENGINEERING REPRESENTATIVE SHALL BE ADVISED BY THE CONTRACTOR OF ANY GROUND WATER OR LOOSE SOIL ENCOUNTERED DURING DRILLING. FOOTINGS SHALL COMPLY WITH TDOT STANDARD DRAWINGS.

15. SIGNAL HEADS VISIBLE TO DRIVERS BUT NOT OPERATIONAL SHALL BE COMPLETELY COVERED.

~~16. SIGNAL HEADS SHALL FLASH A MINIMUM OF SEVEN (7) DAYS PRIOR TO ACTIVATION OF THE TRAFFIC SIGNAL, UNLESS OTHERWISE SPECIFIED BY MDPW TRAFFIC ENGINEER.~~

~~17. IF FIELD ADJUSTMENTS RESULT IN CHANGES TO SIGNAL HEAD PLACEMENT, ATTACHMENT HEIGHTS, OR SPAN WIRE/MAST ARM LENGTH, THE ENGINEER SHALL BE ADVISED AND SHOP DRAWINGS SHALL BE RE–EVALUATED TO VERIFY THAT THE CHANGES ARE STRUCTURALLY ACCEPTABLE.~~

~~18. ALL STOP LINES, CROSSWALK LINES, LANE LINES, AND PAVEMENT ARROWS SHALL BE THERMOPLASTIC. STOP LINES SHALL BE 24 INCHES WIDE. ALL CONFLICTING MARKINGS SHALL BE REMOVED USING AN ACCEPTABLE METHOD AS SPECIFIED BY TDOT SPECIFICATION SECTION 712–TEMPORARY TRAFFIC CONTROL. EXISTING PAVEMENT MARKINGS SHALL BE REAPPLIED AS NECESSARY.~~

~~19. STREET NAME SIGNS ARE TO BE PROVIDED BY MDPW AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED. CONTACT MDPW SIGN SHOP A MINIMUM OF THIRTY (30) DAYS PRIOR TO EXPECTED SIGN INSTALLATION DATE FOR SIGN PREPARATION.~~

20. ALL ITEMS INSTALLED WITHIN THE PEDESTRIAN PATH OF TRAVEL (I.E. SIDEWALK) SHALL MEET THE METRO PUBLIC WORKS STANDARD DETAILS. THIS INCLUDES A MINIMUM PATH OF TRAVEL WIDTH OF 60" AND A PROTRUDING OBJECT LIMIT OF 4" IF MOUNTED AT A HEIGHT BETWEEN 27" AND 80" AND WITHIN THE PATH OF TRAVEL. VARIANCES MUST BE APPROVED BY MDPW.

21. EXISTING SIGNAL EQUIPMENT TO BE REMOVED BY THE CONTRACTOR. ALL SALVAGED EQUIPMENT TO BE RETURNED TO MDPW.

22. EXISTING SIGNAL EQUIPMENT SHALL REMAIN IN OPERATION UNTIL NEW SIGNAL EQUIPMENT IS COMPLETE AND IN FULL OPERATION.

23. ALL NEW SIGNAL HEADS SHALL BE FABRICATED FROM ALUMINUM. ALL NEW SIGNAL HEADS SHALL BE LED TYPE, GELCORE OR METRO APPROVED ALTERNATE. SIGNAL HEAD EQUIPMENT (I.E. FRAME AND ILLUMINATION TYPE) SHALL BE APPROVED BY MDPW PRIOR TO INSTALLATION. ATTACHMENT TO BE WITH "ASTRO" BRACKETS.

~~24. CABINET AND CONTROLLER MUST HAVE ALL EQUIPMENT NECESSARY TO PROVIDE SIGNAL COMMUNICATION VIA PHONE DROP. THIS INCLUDES 1" RISER WITH PULL LINE. THIS DOES NOT INCLUDE THE INSTALLATION OF THE PHONE LINE ITSELF.~~

~~25. CABINET/CONTROLLER TO INCLUDE COORDINATION MODULE, ETHERNET PORT, COMMUNICATIONS PANEL AND OTHER CABINET WIRING AS REQUIRED FOR SYSTEM OPERATION. CONTROLLER TO BE COMPATIBLE WITH EXISTING MDPW CLOSED LOOP SOFTWARE MATS OR AIRES UNLESS OTHERWISE SPECIFIED.~~

26. ALL CONSTRUCTION ACTIVITIES SHALL BE COMPLETED IN FULL COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD, FEDERAL REGISTER 36 CFR PARTS 1190 AND 1191, ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES; ARCHITECTURAL BARRIERS ACT (ABA) ACCESSIBILITY GUIDELINES; PROPOSED RULE, PUBLISHED IN THE FEDERAL REGISTER ON JULY 23, 2004, AS HAS BEEN ADOPTED BY METRO.

27. TRAFFIC SIGNAL SUPPORT POLES SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS LUMINAIRES, AND TRAFFIC SIGNALS (CURRENT EDITION WITH ADDENDA). WIND LOADS SHALL BE BASED ON A BASIC WIND SPEED OF 90MPH WITH A RECURRENCE INTERVAL OF 50YRS. USE THE FATIGUE CATEGORY AS NOTED ON EACH PROPOSED SIGNAL LAYOUT. FATIGUE LOADS ARE BASED ON THE REQUIREMENTS OF SECTION 11.7 AND THE FOLLOWING LOADS:
GALLOPING – NO DESIGN NECESSARY. VIBRATION DAMPENERS SHALL BE USED ON ALL MAST ARMS 50' OR GREATER.
VORTEX SHEDDING – NOT APPLICABLE ON TRAFFIC SIGNAL SUPPORTS WITH A TAPER OF AT LEAST 0.14 IN/FT.
NATURAL WIND GUST – THE YEARLY MEAN WIND SPEED FOR NATURAL WIND GUSTS SHALL BE 11.2MPH.
TRUCK INDUCED GUST – NO DESIGN NECESSARY.
THE TRAFFIC SIGNAL SUPPORT POLES SHALL BE POLES WITH CURVED MAST ARMS IN ACCORDANCE WITH MDPW 730–N POLE AND LIGHTING SPECIFICATIONS JANUARY 31, 2014. FOR POLE AND ARM DETAILS, AND TO CONFIRM DESIGN CRITERIA, CONTACT MIKE HIRTZER, METRO TRAFFIC ENGINEERING, 615–880–3261.

28. ALL OPEN CUTS AND TRENCH REPAIRS SHALL BE PERFORMED IN STRICT ACCORDANCE WITH CURRENT MDPW STANDARD DRAWINGS.

29. ALL SIDEWALK AND RAMP REPAIRS SHALL COMPLY WITH CURRENT MDPW STANDARD DRAWINGS.

30. ALL CONDUITS SHALL BE SCHEDULE 80 PVC UNLESS OTHERWISE NOTED. CONDUIT SHALL BE LAID AT A MINIMUM DEPTH OF 24 INCHES BELOW FINISHED GRADE AND SHALL COMPLY WITH TDOT TRENCHING DETAILS AND CONDUIT PLACEMENT. THE CONTRACTOR SHALL SEAL ALL OPEN CONDUIT ENTRANCE HOLES, WITH OR WITHOUT CABLES, WITH CONDUIT DUCT SEAL PUTTY OR CONDUIT PLUGS. WHERE CABLE ENTER THE CONDUIT, THE SEALANT SHALL BE APPLIED AFTER INSTALLING THE CABLE. THESE LOCATIONS SHALL CONSIST OF CONDUIT ENDS AND PULL BOXES, CABINET BASES AND WEATHER–HEADS.

31. THE PLAN SHEET HAVE BEEN DEVELOPED WITH EXISTING DATA AVAILABLE ~~FROM MULTIPLE SURVEYS~~ AND FIELD VISITS. ALL ITEMS INCLUDED AND SHOWN HEREIN ARE BELIEVED TO REFLECT EXISTING CONDITIONS TO A REASONABLE DEGREE OF ACCURACY. HOWEVER, THE CONTRACTOR HAS FINAL RESPONSIBILITY TO VERIFY ALL EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO, UNDERGROUND UTILITIES, PROPERTY LINES AND DRAINAGE STRUCTURES.

~~32. OPERATION OF EACH INTERNALLY ILLUMINATED STREET NAME SIGN SHALL BE CONTROLLED THROUGH THE USE OF A SINGLE PHOTO CELL (GRAINGER PART #K–4021 OR EQUIVALENT) LOCATED IN THE TOP OF THE CONTROLLER CABINET. INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE WIRED TO A SEPARATE 6 POSITION TERMINAL BLOCK AND A SEPARATE 6 POSITION GROUND BAR LOCATED IN THE CONTROLLER CABINET.~~

~~33. SIGNAL HEADS SHALL INCLUDE LOUVERED BACKPLATES WITH A 1" MINIMUM YELLOW RETRO REFLECTIVE BORDER AROUND THE PERIMETER OF THE FACE OF THE BACKPLATE. THE RETRO REFLECTIVE BORDER TO BE MADE OF A TYPE III PRISMATIC MATERIAL.~~

34. UTILITY MARKINGS SHALL BE CHALK BASED MARKING PAINT ON ASPHALT AND SIDEWALKS, AND REMOVED ONCE CONSTRUCTION IS COMPLETED.

ESTIMATED SIGNAL QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	712-08.06	UNIFORMED POLICE OFFICER	HR	60
(1)	713-16.22	SIGNS (30"X36" ALUMINUM FLAT SHEET)	EACH	1
	717-01	MOBILIZATION	LS	1
(3)	725-03.50	RADAR DETECTION SYSTEM	LS	1
	730-08.03	SIGNAL CABLE - 7 CONDUCTOR	L.F.	15
	730-14.01	SHIELDED DETECTOR CABLE	L.F.	50
	730-23.31	PEDESTAL POLE 10'X4" ALUMINUM	EACH	1
	730-24.07	FOUNDATION (PED POLE 24"X3')	EACH	1
(2)	730-26.02	PEDESTRIAN PUSHBUTTON WITH 15" SIGN	EACH	8

FOOTNOTES

(1) SIGN TO BE MOUNTED OVERHEAD ON MAST ARM.

(2) QUANTITIES ARE SHOWN TO REPLACE ALL PUSHBUTTONS AND SIGNS. IF IT IS DETERMINED IN THE FIELD THAT SOME EXISTING PUSH BUTTONS CAN STAY. THIS IS TO BE DISCUSSED WITH MPW.

(3) ITEM TO INCLUDE ALL HARDWARE AND WIRING FOR A FULLY FUNCTIONAL RADAR DETECTION SYSTEM AS SHOWN ON THE PLANS.

FILE NO.	1704370.03
DATE:	09/21/18
DESIGNED BY:	BJT
DRAWN BY:	JDE
CHECKED BY:	BJT

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METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

INTERSECTION NO. 2245

TRAFFIC SIGNAL NOTES, DETAILS and QUANTITIES

D.B. TODD BLVD. AND JO JOHNSTON AVENUE

SCALE: N.T.S.