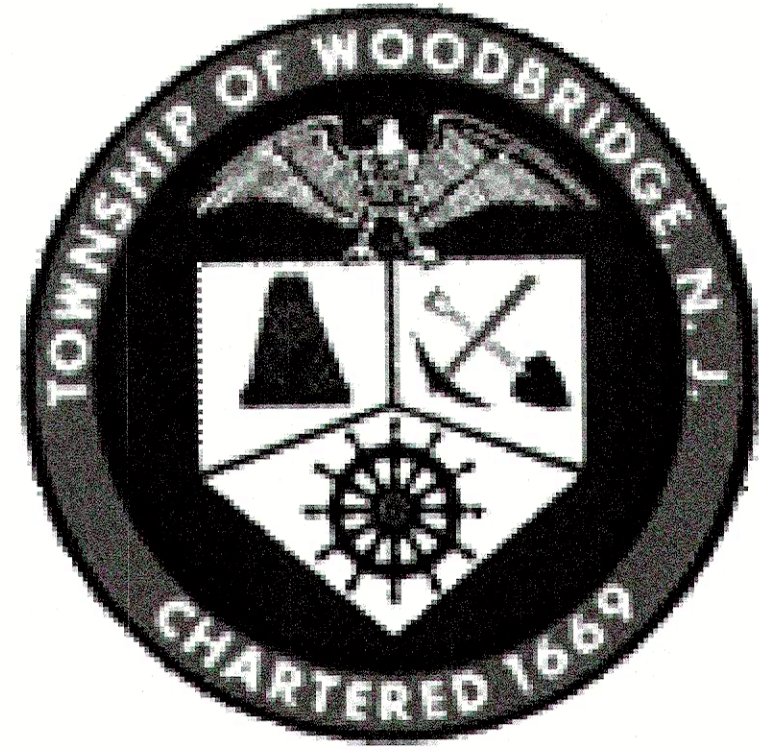


# INTERSECTION IMPROVEMENTS AND TRAFFIC SIGNAL INSTALLATION AT: NEW DOVER ROAD & COLONIA BOULEVARD

TOWNSHIP OF WOODBRIDGE, MIDDLESEX COUNTY, NEW JERSEY

DECEMBER, 2022

CONTRACT # 2022-010



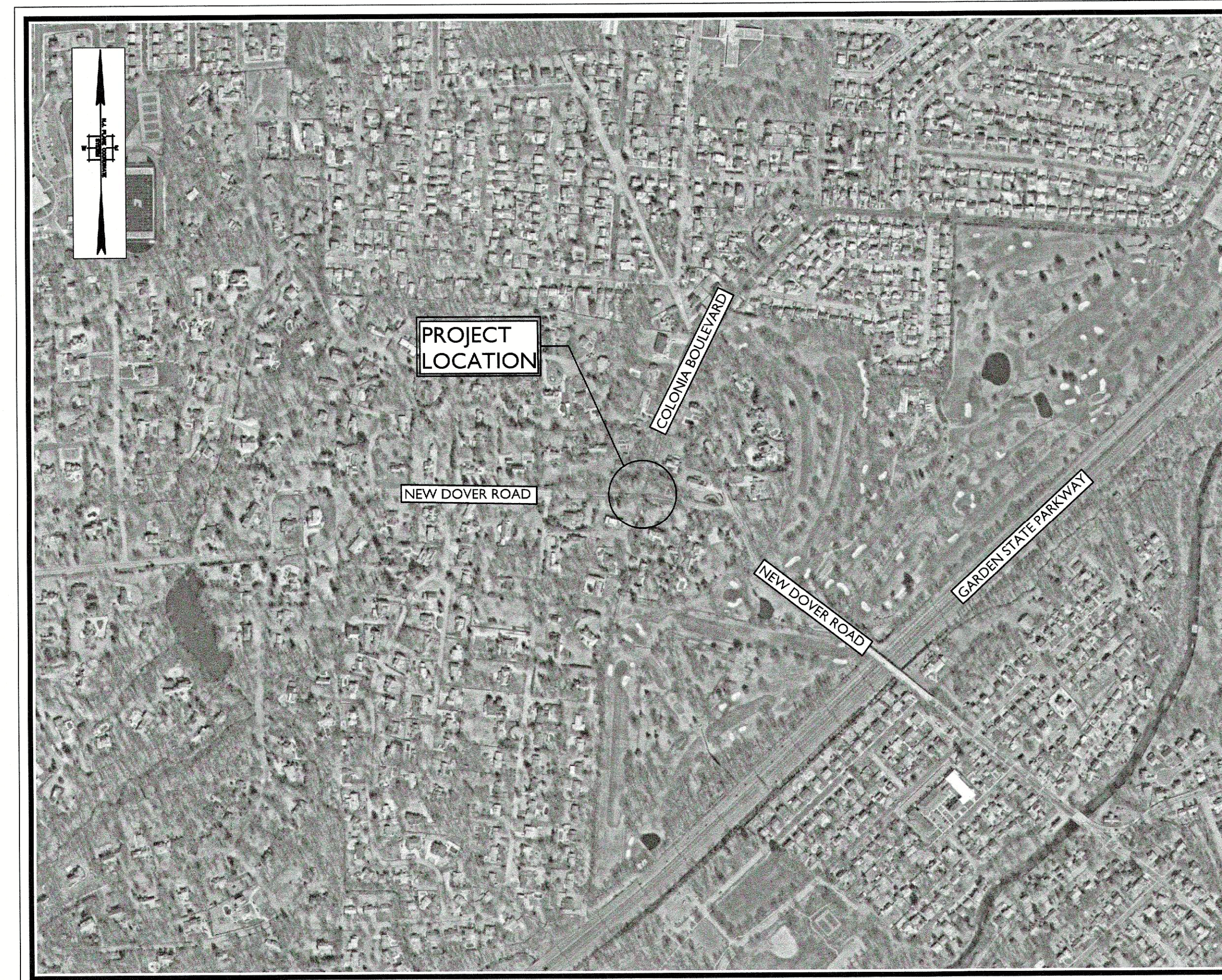
PUBLIC UTILITIES			
UTILITIES	SERVICE	CONTACT	TELEPHONE
ELECTRIC	PSE&G	FRANK LUCCHESI	(609) 638-7608
TELEPHONE	VERIZON	GINA GONNELLA-BARTZ	(908) 412-3984
CABLE	COMCAST	RICHARD GUTUALSKI	(732) 602-7444
GAS	ELIZABETHTOWN GAS COMPANY	BRUCE GARRETT	(908) 662-8311
WATER	MIDDLESEX WATER COMPANY	BRIAN CARR	(732) 634-1500
SEWER	TOWNSHIP OF WOODBRIDGE	MIKE GELIN	(732) 602-6047

**JOHN E. McCORMAC - MAYOR**

TOWNSHIP COUNCIL

HOWIE BAUER	COUNCIL PRESIDENT - SECOND WARD
GREGG M. FICARRA	COUNCIL VICE-PRESIDENT, COUNCILMAN-AT-LARGE
SHARON McAULIFFE	COUNCILWOMAN - FIRST WARD
CORY SPILLAR	COUNCILMAN - THIRD WARD
VRBHADRA N. PATEL	COUNCILMAN - FOURTH WARD
DEBBIE MEEHAN	COUNCILWOMAN - FIFTH WARD
KYLE ANDERSON	COUNCILMAN-AT-LARGE
LIZBETH DeJESUS	COUNCILWOMAN-AT-LARGE
BRIAN SMALL	COUNCILMAN-AT-LARGE

VITO CIMILLUCA	BUSINESS ADMINISTRATOR
JOHN M. MITCH	MUNICIPAL CLERK
JAMES P. NOLAN, JR., ESQ.	DIRECTOR OF LAW
GEORGE T. BREV	DIRECTOR OF PUBLIC WORKS
MICHAEL GELIN, PE	MUNICIPAL ENGINEER



**KEY MAP**

SCALE: 1" = 500'  
SOURCE: NEARMAPS

INDEX OF SHEETS	
SHEET NUMBERS	DESCRIPTION
1	KEY SHEET
2	ESTIMATE AND DISTRIBUTION OF QUANTITIES
3	GENERAL NOTES AND LEGEND
4	CONSTRUCTION PLAN
5	SOIL EROSION AND SEDIMENT CONTROL PLAN
6	SIGNING AND STRIPING PLAN
7-8	ELECTRICAL PLAN
9-10	CURB RAMP DETAILS
11-12	CONSTRUCTION DETAILS

UNDERGROUND LOCATION SERVICE CALL: 1-800-272-1000.

NOTE: LOCATION OF UTILITIES AS SHOWN ON THESE PLANS ARE PLOTTED FROM AVAILABLE DATA ON FILE WITH THE UTILITY COMPANIES AND IS NOT GUARANTEED AS TO EXACTNESS. THE CONTRACTOR IS TO CONTACT UTILITY COMPANIES 72 HOURS PRIOR TO CONSTRUCTION TO DETERMINE EXACT LOCATION AND DEPTH OF ALL UTILITIES. THE CONTRACTOR SHALL USE THE UTILITY LOCATIONS SHOWN AS AN AID IN DETERMINING EXACT LOCATIONS. CONTRACTOR SHALL NOT START CONSTRUCTION UNTIL SUPPLYING THE TOWNSHIP ENGINEER WITH THE ONE-CALL CONFIRMATION NUMBER.

THE NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF 2019 TO GOVERN, AS MODIFIED BY THE TECHNICAL SPECIFICATIONS.  
NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD ROADWAY CONSTRUCTION/TRAFFIC CONTROL/BRIDGE CONSTRUCTION DETAILS (2016) AND ELECTRICAL DETAILS (2007) ARE APPLICABLE TO THIS PROJECT EXCEPT FOR THOSE DETAILS CONTAINED HEREIN.



*Keith M. Hall*  
Keith M. Hall  
NEW JERSEY LICENSED PROFESSIONAL ENGINEER  
LICENSE NUMBER: GES22853  
COLLIERS ENGINEERING & DESIGN, INC.  
N.J. C.O.A. #: 246A27986500



# NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD LEGEND

Linear Features	
Existing	PROPOSED
	Water Main (Size)
	Gas Main (Size)
	Telephone Conduit
	Electric Conduit (Highway or Utility)
	Cable TV
	Fiber Optic
	Sanitary Sewers or Storm Drains
	Pavements (Concrete or Bituminous)
	Shoulders
	Curbs
	Slopes (Cut & Fill)
	Base Line
	Twp., City, County Lines
	Right of Way Lines (Access Permitted)
	Right of Way Lines (No Access)
	Easements
	Property Line
	Fence (Size & Type)
	Reset Fence
	Beam Guide Rail
	Reset Beam Guide Rail
	Noise Walls
	Wetland Limit Line
	Silt Fence
	Ditches
	Railroad Tracks
	Tree Line
	Overhead Power lines

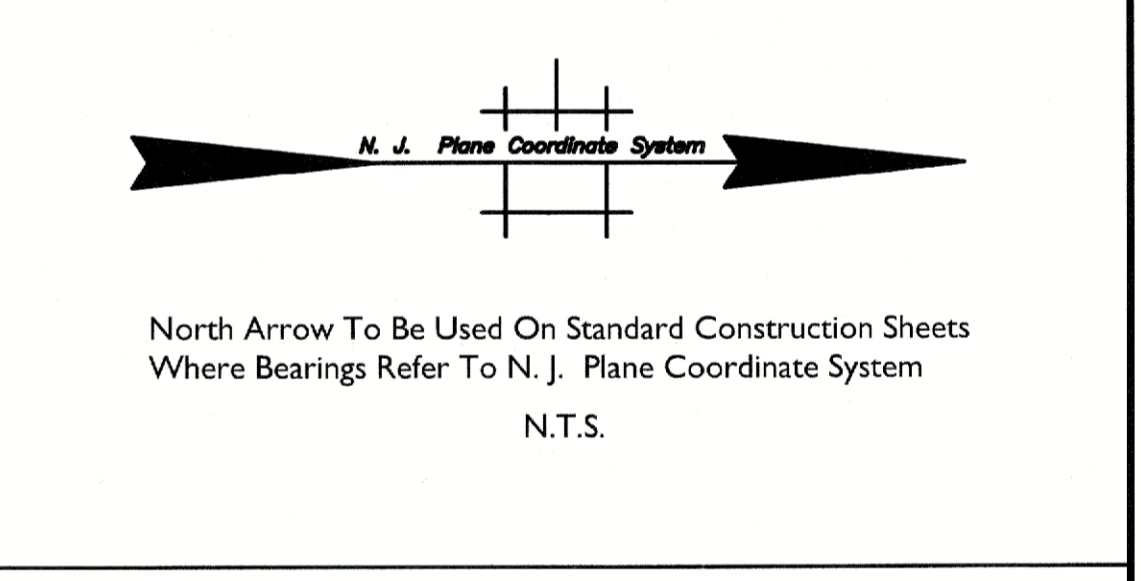
Topographical Features	
Existing	PROPOSED
	Inlets (Label Type)
	Inlets (Type ES)
	Manholes (Label Type or Utility)
	Reset (Inlets or Manholes)
	Reset Inlet, New Casting
	Reconstructed (Inlets or Manholes)
	Cast Iron Extension (Frame or Ring) (Inlet or Manhole)
	New Manhole Casting, Square Frame, Circular Cover
	R.C. End Section or C.M. Headwall
	Headwalls
	Headwalls & Aprons
	Water Gate Valves
	Reset Water Gate Valves
	Gas Gate Valves
	Reset Gas Gate Valves
	Hydrants
	Reset Hydrants
	Utility Pole (Type & Number)
	Temporary Utility Pole
	Traffic Signal
	Junction Box
	Fiber Optic Junction Box
	Junction Box Foundation
	Signs
	Controller

Topographical Features	
Existing	PROPOSED
	Vertical Panels
	Guide Rail End Terminals
	Beam Guide Rail Anchorages
	Monuments
	ROW Monument (ROW Control Points)
	Test Pit
	Borings (Boring Number)
	Deciduous Tree (Size, Kind)
	Evergreens
	Bush
	Hedges
	Swamp

Double Reference Codes	
EDEQ	ESTIMATE AND DISTRIBUTION OF QUANTITIES - ROADWAY
TS	TYPICAL SECTIONS
PSI	PLAN SHEET INDEX
C	CONSTRUCTION PLANS
EP	ENVIRONMENTAL PLANS
SE	SOIL EROSION & SEDIMENT CONTROL PLANS
D	DRAINAGE PLANS
DTL	CONSTRUCTION DETAILS
P	PROFILE
T	TIES
G	GRADES
TC	TRAFFIC CONTROL AND STAGING PLANS
TSP	TRAFFIC SIGNAL PLANS
E	ELECTRICAL PLANS
HL	HIGHWAY LIGHTING PLANS
ITS	INTELLIGENT TRANSPORTATION SYSTEM PLANS
SL	SIGN LOCATION PLANS
TSS	TRAFFIC SIGNING AND STRIPING
STD	SIGN TEXT DETAILS
L	LANDSCAPE PLANS
MS	METHOD OF CROSS SECTIONS
X	CROSS SECTIONS
EQB	ESTIMATE OF QUANTITIES - BRIDGE
B	BRIDGE PLANS

Miscellaneous Symbols	
	Install New Concrete Sidewalk/Driveway
	Topsoiling, 4" Thick Fertilizing and Seeding, Type A-4 Straw Mulching
	Full Depth Pavement Removal/Repair
	Detectable Warning Surface
	Milling/Paving

	High Point
	Low Point
	Bench Mark



## ABBREVIATIONS USED IN THIS CONTRACT

AH, BK	AHEAD, BACK	J.B.	JUNCTION BOX	R.C.P.	R.C.P.	REINFORCED CONCRETE PIPE
AVE.	AVENUE	LED	LIGHT-EMITTING DIODE	R.M.C.	R.M.C.	RIGID METALLIC CONDUIT
B.L.	BASELINE	LT., RT.	LEFT, RIGHT	R.N.M.C.	R.N.M.C.	RIGID NON-METALLIC CONDUIT
B.M.	BENCH MARK	L.O.D.	LIMIT OF DISTURBANCE	R.O.W.	R.O.W.	RIGHT OF WAY
B.T.	BELL TELEPHONE	L.O.P.	LIMIT OF PAVEMENT (PAVING)	R.R.	R.R.	RAILROAD
BIT., BITUM.	BITUMINOUS	L.O.M.	LIMIT OF MILLING	RTE., RT.	RTE., RT.	ROUTE
BLDG.	BUILDING	M.B.	MAILBOX	SAN.	SAN.	SANITARY
C.	CENTERLINE	M.P.	MILE POST	SDWK.	SDWK.	SIDEWALK
C.I.P.	CAST IRON PIPE	MAX.	MAXIMUM	S.H.D.	S.H.D.	STATE HIGHWAY DEPARTMENT
CKT	CIRCUIT	MIN.	MINIMUM	SHLD.	SHLD.	SHOULDER
CKTS	CIRCUITS	MPH	MILES PER HOUR	S.L.	S.L.	SURVEY LINE
CLF	CHAIN-LINK FENCE	MUTC.D.	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES	S.O.D.	S.O.D.	SUBBASE OUTLET DRAIN
C.M.P.	CORRUGATED METAL PIPE	NO.	NUMBER	STY.	STY.	STORY
CONC.	CONCRETE	N.T.S.	NOT TO SCALE	ST.	ST.	STREET
CR, C.R.	COUNTY ROUTE	PAVT.	PAVEMENT	T	T	TANGENT
CULV.	CULVERT	PERF.	PERFORATED	TBA	TBA	TO BE ABANDONED
D, DIA.	DIAMETER	P.G.L.	PROFILE GRADE LINE	TBR	TBR	TO BE REMOVED
D.C.	DROP CURB	ε, P.L.	PROPERTY LINE, PROFILE LINE	TEL.	TEL.	TELEPHONE
DE	DITCH EXCAVATION	PK	PARKER KAYLON MASONRY NAIL	TEMP.	TEMP.	TEMPORARY
DEP., DP	DEPRESSED CURB	POC, P.O.C.	POINT ON CURVE	THK., TH.	THK., TH.	THICK
DH	DRILL HOLE	POL, P.O.L.	POINT ON LINE	TYP.	TYP.	TYPICAL
DWY	DRIVEWAY	POT, P.O.T.	POINT ON TANGENT	U.D.	U.D.	UNDERDRAIN
E.B., W.B., N.B., S.B.	EASTBOUND, WESTBOUND, NORTHBOUND, SOUTHBOUND	P.R.C., P.R.C.	POINT OF REVERSE CURVE	UP, U.P.	UP, U.P.	UTILITY POLE
EL, ELEV.	ELEVATION	PROP.	PROPOSED	VAR.	VAR.	VARIABLE, VARIES
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE	P.V.I.	POINT OF VERTICAL INTERSECTION	VCT	VCT	VERTICAL CURB TRANSITION
EX	EXISTING	P.V.C.	POLYVINYL CHLORIDE PIPE	W.C.V.C.	W.C.V.C.	WHITE CONCRETE VERTICAL CURB
HT.	HEIGHT	WM	WATER METER	X-SECT	X-SECT	CROSS SECTION
GR.	GRATE	P.V.I., P.V.I.	POINT OF VERTICAL INTERSECTION			
H.W.	HEADWALL	P.V.T.	POINT OF VERTICAL TANGENCY, PAVEMENT			
HYD.	HYDRANT	R	RADIUS			
INV.	INVERT	RCCP, R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE			
IP	IRON PIN					

## GENERAL NOTES:

- THE INFORMATION SHOWN ON THESE PLANS CONCERNING TYPE AND LOCATIONS OF UTILITIES IS BASED ON INFORMATION AVAILABLE AT THE TIME OF DESIGN AND IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERE TO.
- EXCAVATE AND REPLACE ANY UNSTABLE SUBGRADE MATERIALS WITH DENSE-GRADED AGGREGATE.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TRAFFIC CONTROL DEVICES, UTILITY LOCATIONS, SIGNS, STREET FURNITURE, AND DRAINAGE TO ENSURE A CONTINUOUS PEDESTRIAN ACCESS ROUTE AT ALL CURB RAMP LOCATIONS.
- MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE CURRENT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTC.D) AND THE MOST CURRENT EDITION OF THE NJDOT STANDARD TRAFFIC CONTROL DETAILS. THE DETAILS FOR THIS PROJECT WILL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
  - TCD-5 "2 LANES, UNDIVIDED, INTERSECTION"
  - TCD-6 "2 LANES, UNDIVIDED, INTERSECTION"
  - TCD-7 "2 LANES, UNDIVIDED, INTERSECTION"
- FOR TRAFFIC CONTROL, CONTRACTOR SHALL USE LOCAL POLICE AS MANDATED BY LOCAL GOVERNMENT.
- ALL ROADWAYS SHALL REMAIN OPEN TO THROUGH TRAFFIC DURING CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. ANY ERRORS OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
- ALL FILL SHALL BE PLACED IN 12 INCH LAYERS AND THOROUGHLY COMPACTED TO THE SATISFACTION OF THE ENGINEER. IF BORROWED FILL IS REQUIRED, IT SHALL BE CLEAN GRANULAR SOIL AND IT SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
- ALL GRASSED AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED AND BE SEED IN ACCORDANCE WITH THE SPECIFICATIONS UNLESS OTHERWISE SHOWN OR SPECIFIED.
- CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING TREES AND SHRUBS IN THE WORK AREA AND SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGING OF TREES AND SHRUBS.
- THE CONTRACTOR SHALL ADHERE TO THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY."
- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL EXCESS MATERIAL FROM THE JOB SITE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION LAYOUT OF THE PROJECT.
- ALL DIMENSIONS AND GRADES SHOWN ON THE PLAN SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER OR THE ENGINEER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK NEEDING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN. ENGINEER RESERVES THE RIGHT TO CORRECT THESE DRAWINGS.
- INFORMATION SHOWN ON THESE PLANS TAKEN FROM TAX MAPS AND DRAWN ON PLANS PREPARED BY COLLIER'S ENGINEERING & DESIGN.
- CONTRACTOR RESPONSIBLE FOR COORDINATING WITH TOWNSHIP ON PERMITTED WORK HOURS.
- ACCESS TO ALL ADJACENT PROPERTIES AND RESIDENCES SHALL BE MAINTAINED AT ALL TIMES.
- ALL WORK WILL BE CONSTRUCTED USING MATERIALS AND PRACTICES APPROVED BY THE 2019 SPECIFICATIONS AND 2016 STANDARD DETAILS FOR ROAD AND BRIDGE CONSTRUCTION ISSUED BY THE NEW JERSEY DEPARTMENT OF TRANSPORTATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING UTILITY COMPANIES TO DETERMINE EACH COMPANY'S SCHEDULE FOR THE RELOCATION AND/OR RESETTling OF THEIR FACILITIES IF REQUIRED. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR COORDINATING UTILITY WORK SO THAT ANY CONTRACT WORK OR DELAY THE EFFORTS OF THE UTILITY COMPANIES.
- CONTRACTOR SHALL LOCATE AND PRESERVE ALL UNDERGROUND AND SURFACE UTILITIES AND STRUCTURES AT OR ADJACENT TO THE SITE OF CONSTRUCTION, AND SHALL REPAIR OR REPLACE ANYTHING THAT HE DAMAGES AT HIS EXPENSE.
- THE CONTRACTOR SHALL MAINTAIN DRIVEWAY AND PEDESTRIAN ACCESS AT ALL LOCATIONS THROUGHOUT THE DURATION OF THE PROJECT.
- THE ENGINEER AND THE APPROPRIATE UTILITY COMPANIES MUST BE NOTIFIED IMMEDIATELY OF ANY UTILITY CONFLICTS FOUND DURING CONSTRUCTION.

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WOODBRIDGE TOWNSHIP

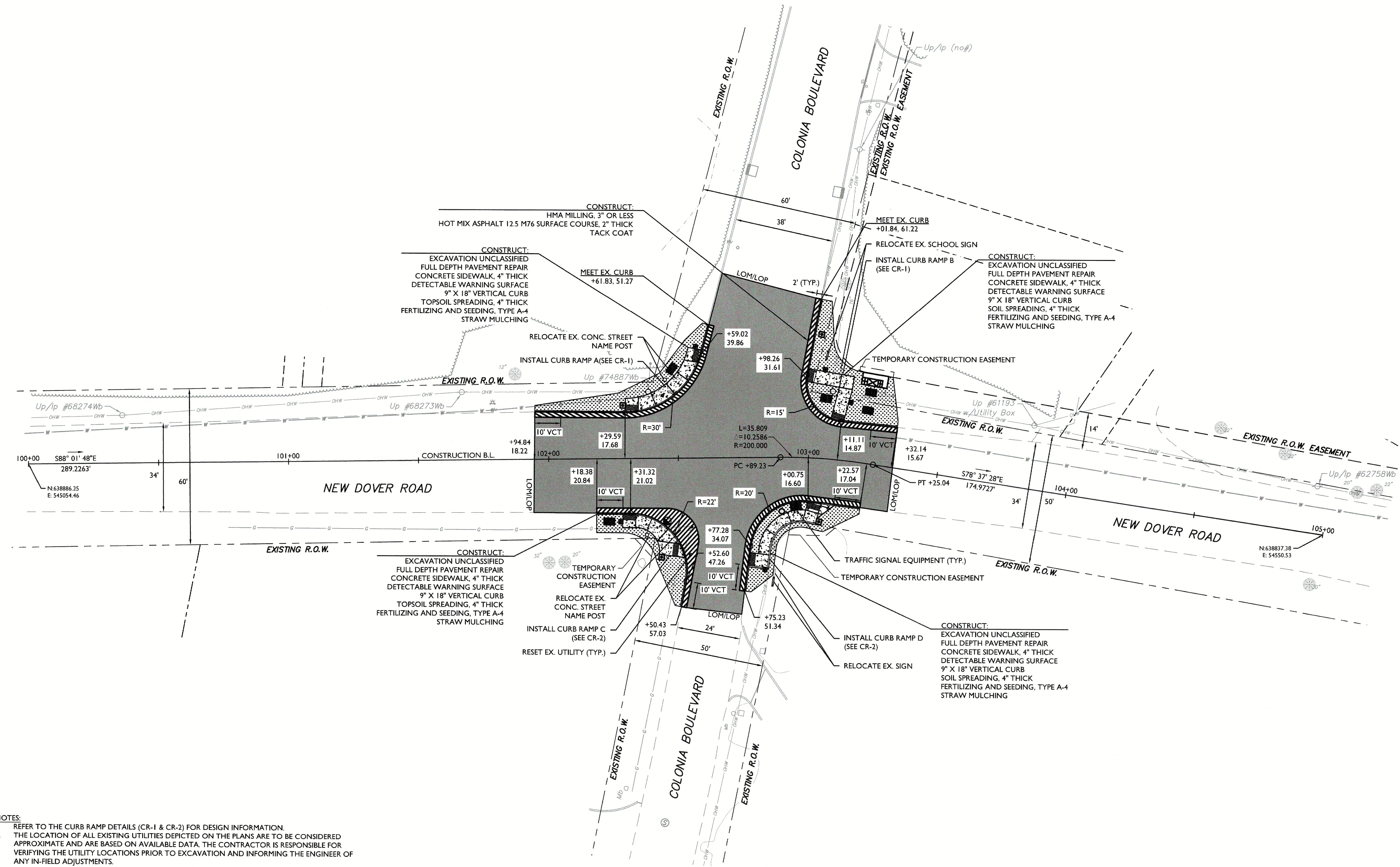
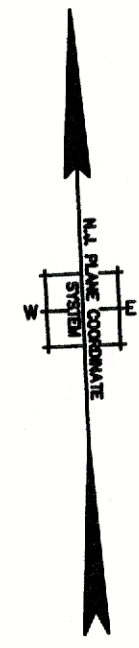
**GENERAL NOTES AND LEGEND**

INTERSECTION IMPROVEMENTS AT  
NEW DOVER ROAD AND COLONIA BOULEVARD

WOODBRIDGE TOWNSHIP, MIDDLESEX COUNTY, NEW JERSEY

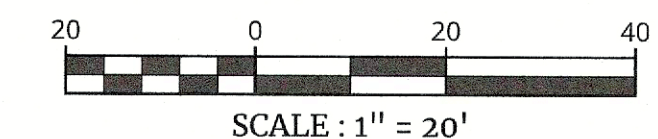
**Keith M. Hall**  
NEW JERSEY LICENSED PROFESSIONAL ENGINEER  
LICENSE NUMBER: 6523883  
COLLIERS ENGINEERING & DESIGN, INC.  
N.J. C.O.A. #: 246A27986500

SCALE	DATE	DRAWN BY	CHECKED BY
N/A	12/5/2022	KGL	KMH
PROJECT NUMBER:	DRAWING NAME:		
21007268G	R-PL03-GN1G		
SHEET NUMBER:			
3 OF 12			



- NOTES:**
- REFER TO THE CURB RAMP DETAILS (CR-1 & CR-2) FOR DESIGN INFORMATION.
  - THE LOCATION OF ALL EXISTING UTILITIES DEPICTED ON THE PLANS ARE TO BE CONSIDERED APPROXIMATE AND ARE BASED ON AVAILABLE DATA. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE UTILITY LOCATIONS PRIOR TO EXCAVATION AND INFORMING THE ENGINEER OF ANY IN-FIELD ADJUSTMENTS.
  - UTILITY POLE NUMBERS: 60601WB, 61193, 62758WB, 68273WB, 68274WB, 68291, 74887WB
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING UTILITY RESETS (ASSOCIATED COSTS INCLUDED IN THE VARIOUS PAY ITEMS).
  - CONTRACTOR IS RESPONSIBLE FOR RESTORING ADJACENT LANDSCAPING ON SOUTHEAST CORNER TO EXISTING CONDITIONS (ASSOCIATED COSTS INCLUDED IN CLEARING SITE PAY ITEM).
  - CONTRACTOR IS RESPONSIBLE FOR RELOCATING VARIOUS SIGN POSTS TO PROPOSED LOCATIONS (ASSOCIATED COSTS INCLUDED IN CLEARING SITE PAY ITEM).

ITEM NO.	TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITY
13	EXCAVATION, UNCLASSIFIED	CY	86
14	TACK COAT	GAL	84
15	HOT MIX ASPHALT 12.5 M 76 SURFACE COURSE	T	101
16	HMA MILLING, 3" OR LESS	SY	840
17	FULL DEPTH PAVEMENT REPAIR	SY	81
21	CONCRETE SIDEWALK, 4" THICK	SY	73
24	DETECTABLE WARNING SURFACE	SY	9
25	9" X 18" CONCRETE VERTICAL CURB	LF	289
62	TOPSOIL SPREADING 4" THICK	SY	167
63	FERTILIZING AND SEEDING, TYPE A-4	SY	167
64	STRAW MULCHING	SY	167



WOODBRIDGE TOWNSHIP ENGINEERING & DESIGN, INC.

REV	DATE	DRAWN BY	DESCRIPTION

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WOODBRIDGE TOWNSHIP

**CONSTRUCTION PLAN**

INTERSECTION IMPROVEMENTS AT  
NEW DOVER ROAD AND COLONIA BOULEVARD

WOODBRIDGE TOWNSHIP, MIDDLESEX COUNTY, NEW JERSEY

*Keith M. Hall*  
**Keith M. Hall**  
NEW JERSEY LICENSED PROFESSIONAL ENGINEER  
LICENSE NUMBER: GE52883  
COLLIERS ENGINEERING & DESIGN, INC.  
N.J. C.O.A. #: 24GA27386520

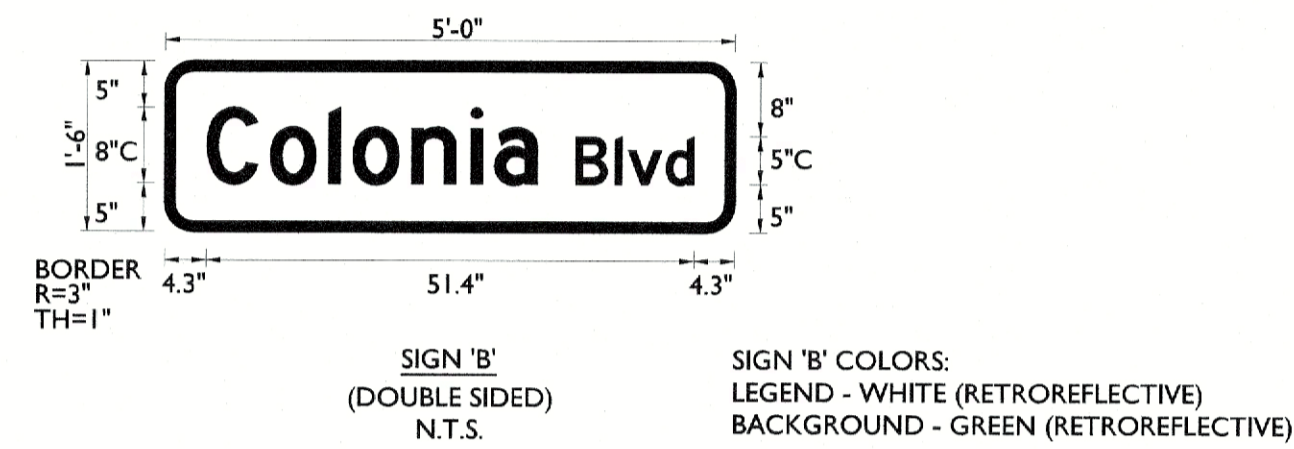
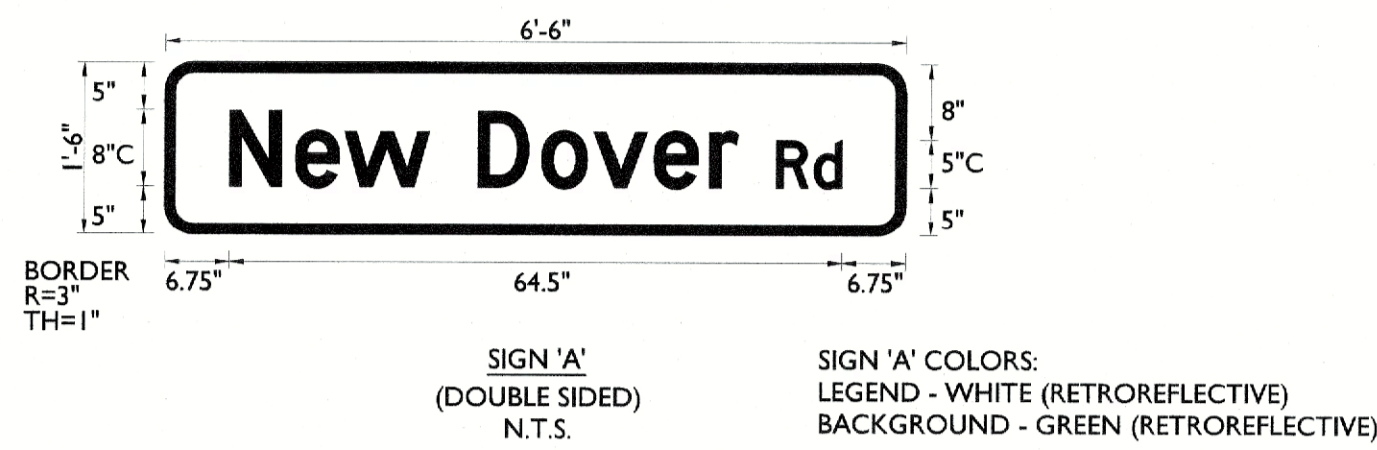
SCALE: AS SHOWN	DATE: 12/5/2022	DRAWN BY: KGL	CHECKED BY: KMH
PROJECT NUMBER: 21007268G	DRAWING NAME: R-PLD6-CNST	SHEET NUMBER:	

4 OF 12

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



MAST ARM SIGN LEGEND



PAVEMENT MARKING LEGEND

- UNLESS OTHERWISE SHOWN, PAVEMENT MARKINGS SHALL CONFORM TO THE FOLLOWING:
- STOP LINE: -24" WIDE WHITE LINE
  - CENTER LINE: -2-4" WIDE YELLOW LINES
  - DASHED LANE LINE: -4" WIDE WHITE LINE, 10' LONG AT 30' INTERVALS
  - LANE EXTENSION GUIDE LINES: -4" WIDE WHITE LINE, 2' LONG AT 4' INTERVALS
  - SOLID LANE LINE-EXCLUSIVE MOVEMENT: -8" WIDE WHITE LINE
  - SOLID LANE LINE-ALL OTHERS: -4" WIDE WHITE LINE
  - CROSSWALK LINES: -8" WIDE WHITE LINE
  - LONGITUDINAL CROSSWALK LINES: -12" WIDE WHITE LINES AT 90° SPACED 3' C-C.
  - MEDIAN CROSS HATCH LINES: -24" WIDE YELLOW LINES AT 45° SPACED 12' O.C.
  - GORE CROSS HATCH LINES: -24" WIDE WHITE LINES AT 45° SPACED 12' O.C.
  - ISLAND CHANNELIZATION LINE: -8" WIDE WHITE LINE
  - RIGHT SHOULDER LINE: -4" WIDE WHITE LINE
  - LEFT SHOULDER LINE: -4" WIDE YELLOW LINE

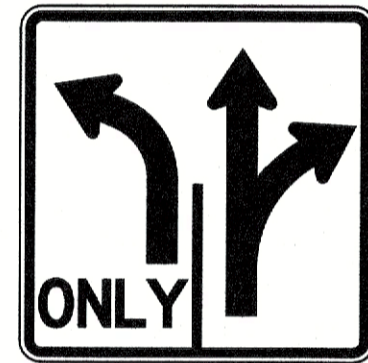
- NOTES:
- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
  - 2) NEAREST CROSSWALK LINE IS TO BE LOCATED A MINIMUM OF 6' FROM STOP LINE
  - 3) EXISTING STRIPING THAT DOES NOT CONFORM TO THIS PLAN SHALL BE REMOVED BY THE GRINDING METHOD.
  - 4) ALL CONFLICTING SIGNS, TREES AND OTHER OBSTRUCTIONS SHALL BE REMOVED AS PART OF THIS CONSTRUCTION.
  - 5) W = WHITE STRIPE  
Y = YELLOW STRIPE

SIGNAL EQUIPMENT LEGEND

- SIGNAL FOUNDATION
- TRAFFIC SIGNAL MAST ARM (TSMA)
- ⊥ TRAFFIC SIGN
- MAST ARM MOUNTED SIGN (MAS)
- ⊞ CONTROLLER

SIGN LEGEND

- OM3-R OBJECT MARKER (RIGHT) 12" X 36"
- W3-3 SIGNAL AHEAD 30" X 30"
- W14-2 NO OUTLET 30" X 30"
- W16-15P NEW 24" X 12"

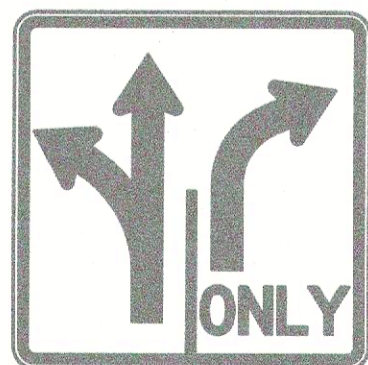


30" x 30"  
R(NJ)3-8F  
N.T.S.

COLORS:  
LEGEND = BLACK  
BACKGROUND = WHITE (RETROREFLECTIVE)

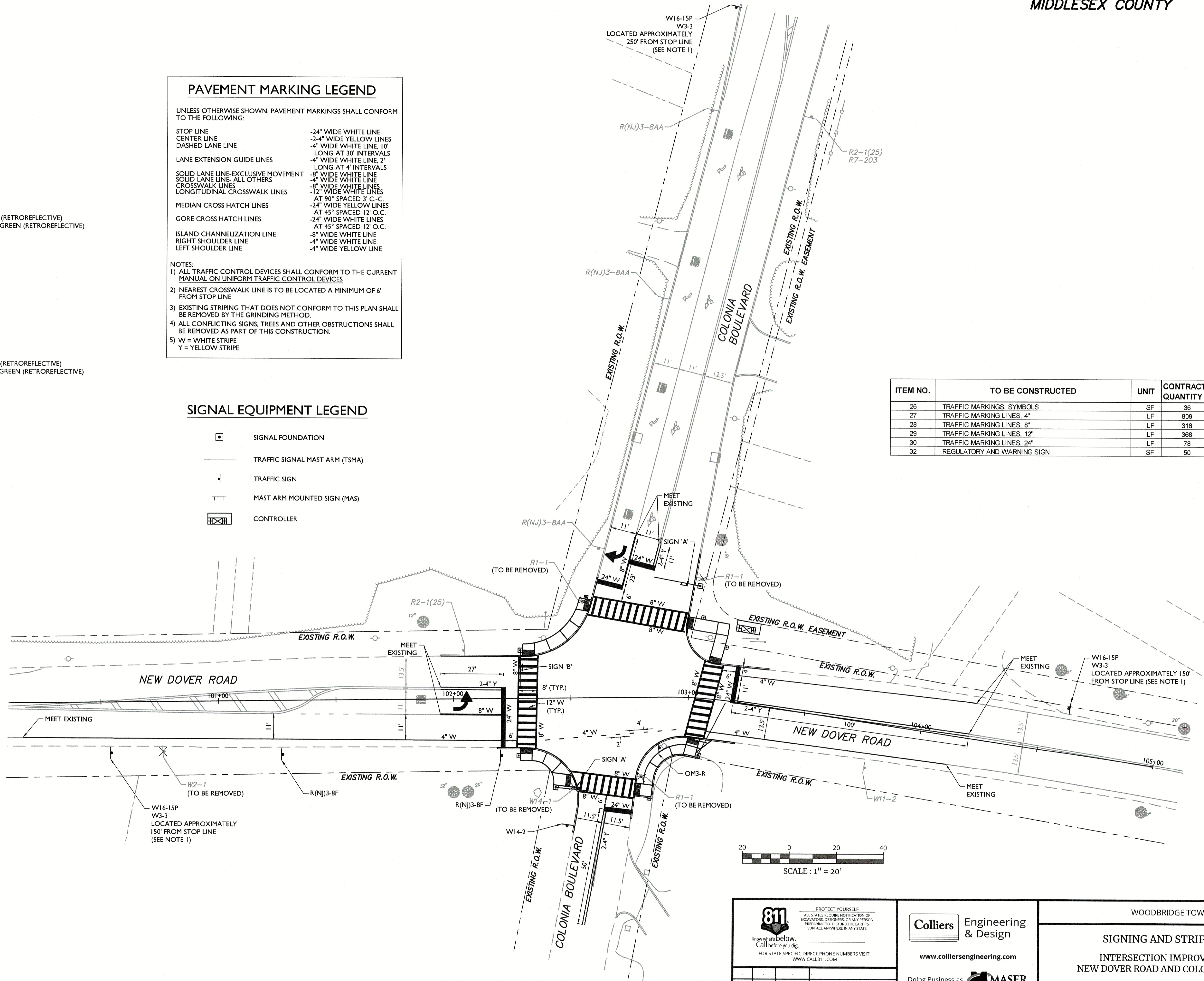
EXISTING SIGN LEGEND

- R2-1(25) SPEED LIMIT (25 MPH) 24" X 30"
- R7-203 EMERGENCY SNOW ROUTE 18" X 24"
- W11-2 PEDESTRIAN 30" X 30"

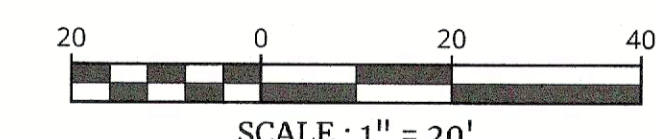


30" x 30"  
R(NJ)3-BAA  
N.T.S.

COLORS:  
LEGEND = BLACK  
BACKGROUND = WHITE (RETROREFLECTIVE)



ITEM NO.	TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITY
26	TRAFFIC MARKINGS, SYMBOLS	SF	36
27	TRAFFIC MARKING LINES, 4"	LF	809
28	TRAFFIC MARKING LINES, 8"	LF	316
29	TRAFFIC MARKING LINES, 12"	LF	368
30	TRAFFIC MARKING LINES, 24"	LF	78
32	REGULATORY AND WARNING SIGN	SF	50



NOTE:  
1. THE PROPOSED "SIGNAL AHEAD" (W3-3) SIGN AND "NEW" (W16-15P) PLAQUE SHALL BE REMOVED AFTER THE TRAFFIC SIGNAL HAS BEEN IN OPERATION FOR SIX MONTHS.

REV	DATE	DRAWN BY	DESCRIPTION

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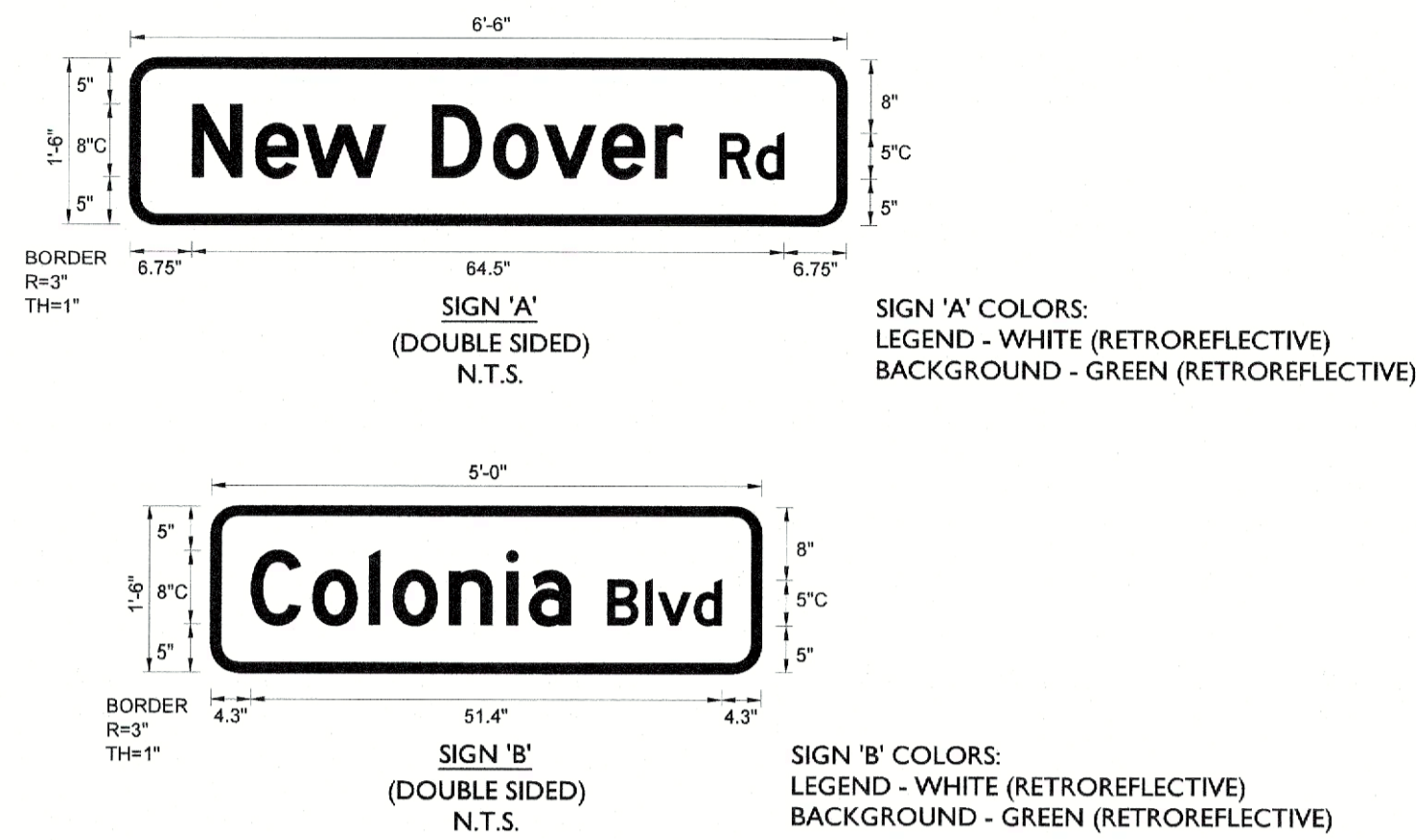
WOODBRIDGE TOWNSHIP  
SIGNING AND STRIPING PLAN  
INTERSECTION IMPROVEMENTS AT  
NEW DOVER ROAD AND COLONIA BOULEVARD  
WOODBRIDGE TOWNSHIP, MIDDLESEX COUNTY, NEW JERSEY

Keith M. Hall  
NEW JERSEY LICENSED PROFESSIONAL ENGINEER  
LICENSE NUMBER: GE52883  
COLLIERS ENGINEERING & DESIGN, INC.  
N.J. C.O.A. #: 24GA27986500

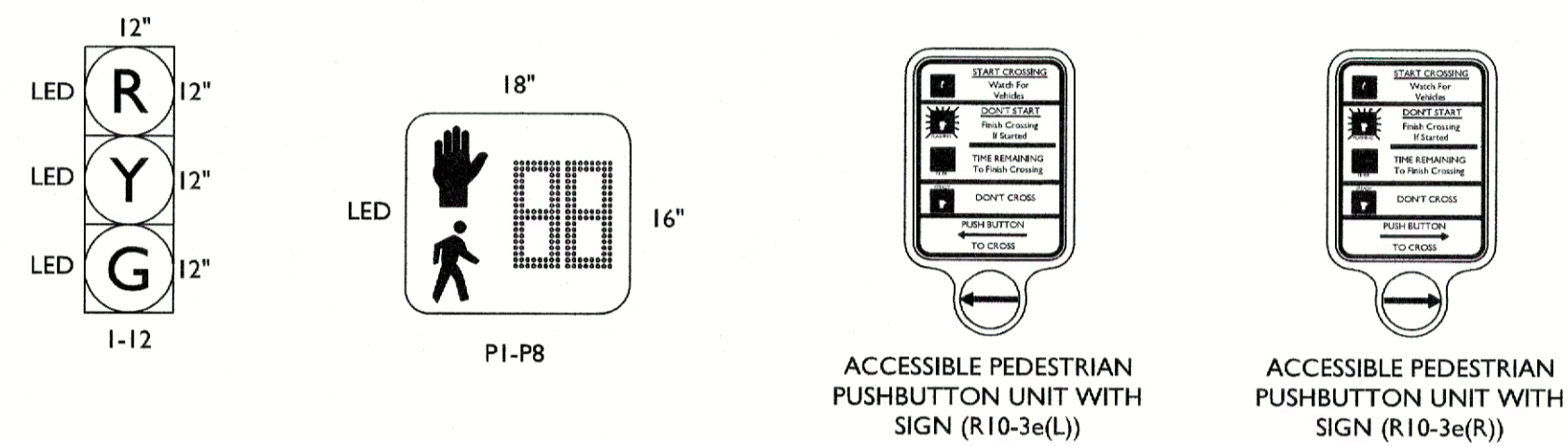
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PROJECT NUMBER: 21007268G DRAWING NAME: R-PL17-TSSP  
SHEET NUMBER: 6 OF 12

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

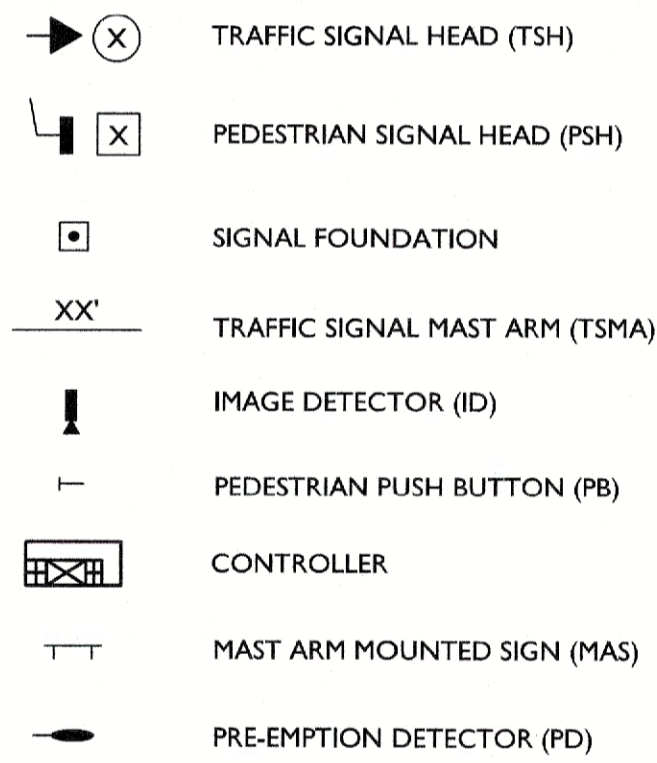
MAST ARM SIGN LEGEND



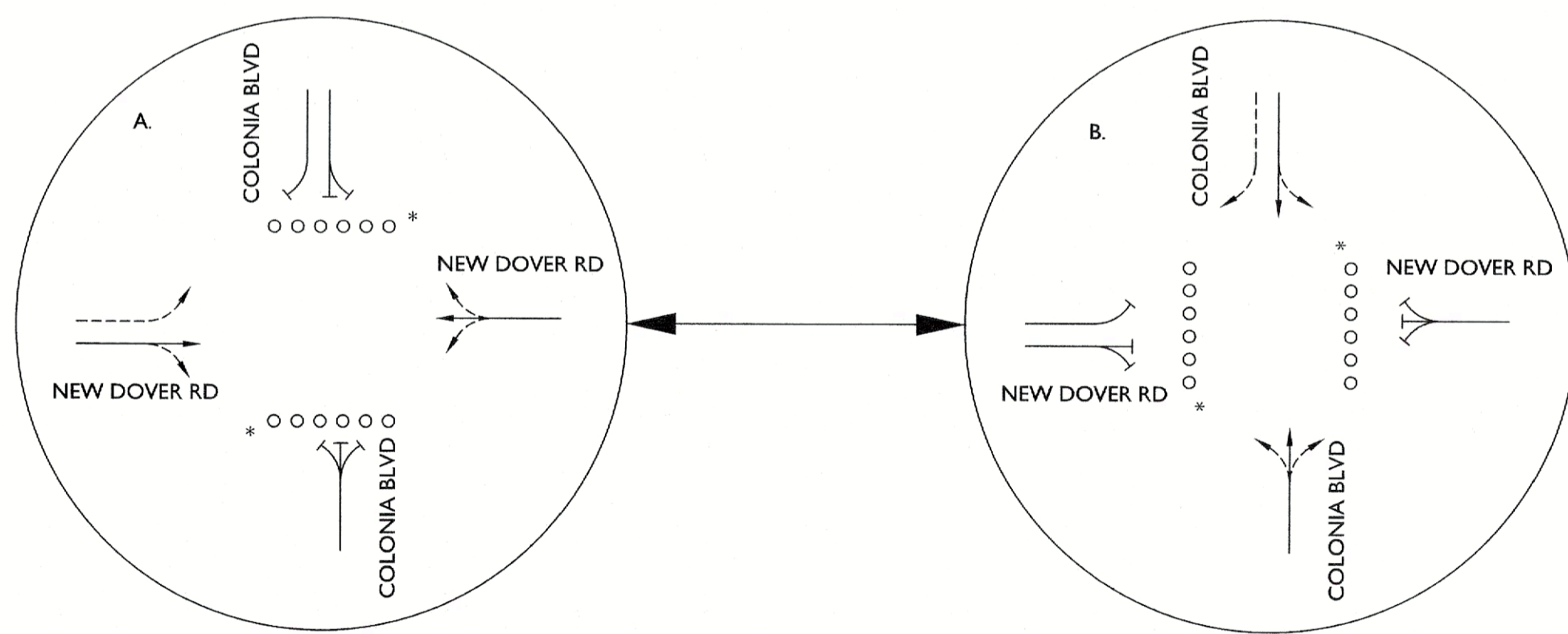
SIGNAL LEGEND



SIGNAL EQUIPMENT LEGEND



PHASING DIAGRAM



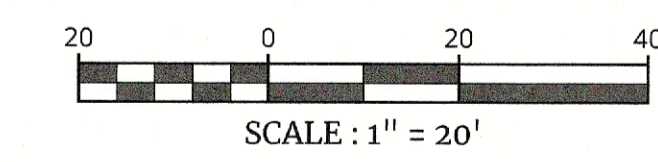
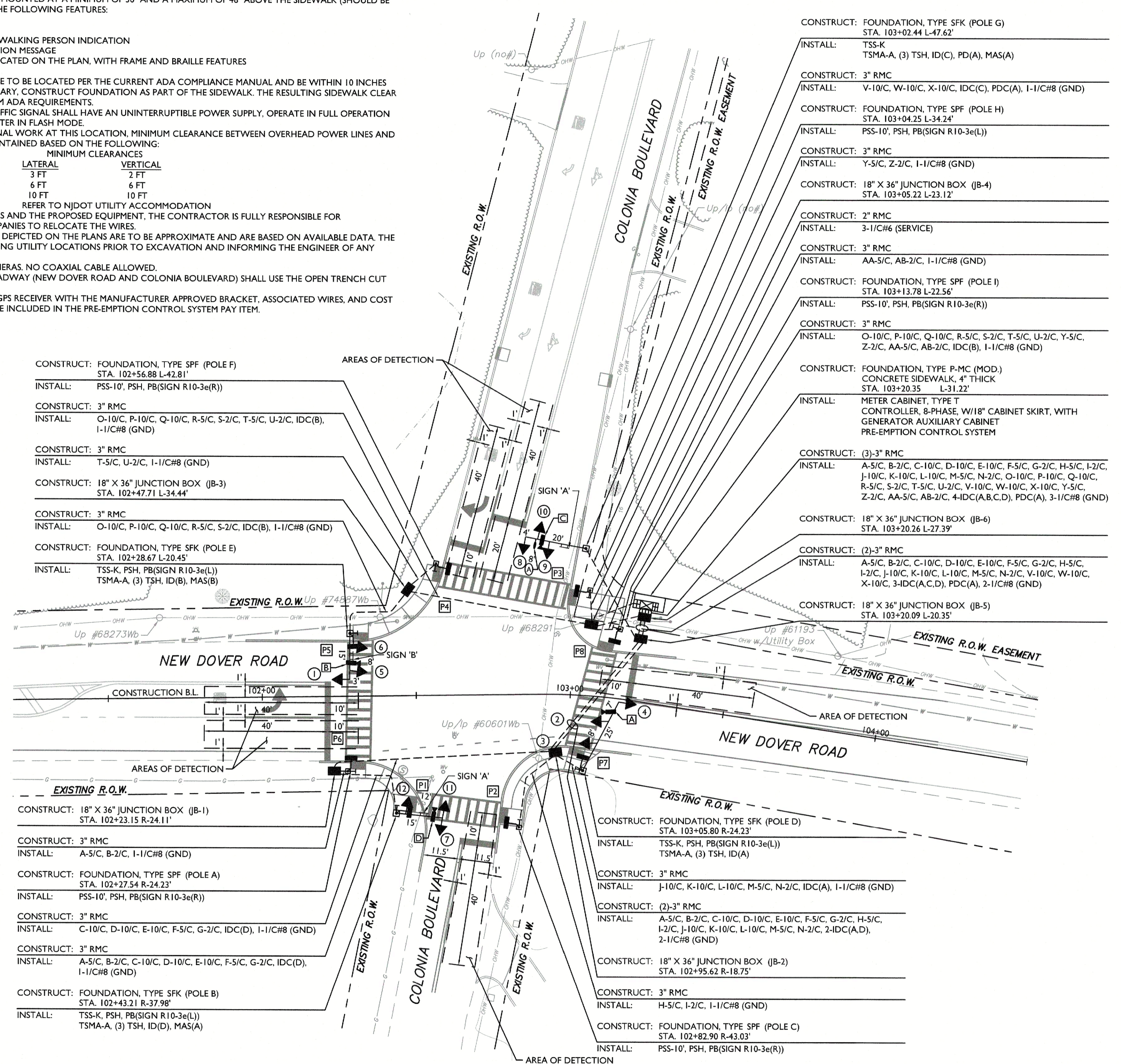
\* ONLY OCCURS UNDER PEDESTRIAN ACTUATION

NOTES:

- ALL PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED AT 8 FEET.
- ALL TRAFFIC SIGNALS SHALL BE EQUIPPED WITH REFLECTORIZED BACKPLATES.
- ALL PEDESTRIAN PUSH BUTTONS SHALL BE MOUNTED AT A MINIMUM OF 36" AND A MAXIMUM OF 48" ABOVE THE SIDEWALK (SHOULD BE 42"). BE ADA COMPLIANT AND INCLUDE THE FOLLOWING FEATURES:
  - PUSH BUTTON LOCATOR
  - A TACTILE ARROW
  - A SPEECH WALK MESSAGE FOR THE WALKING PERSON INDICATION
  - A SPEECH PUSH BUTTON INFORMATION MESSAGE
  - TYPE R10-3e PUSH BUTTON, AS INDICATED ON THE PLAN, WITH FRAME AND BRAILLE FEATURES
  - EXTENSION BRACKET
- PEDESTRIAN PUSH BUTTON CONTROLS ARE TO BE LOCATED PER THE CURRENT ADA COMPLIANCE MANUAL AND BE WITHIN 10 INCHES LATERALLY FROM THE LANDING. IF NECESSARY, CONSTRUCT FOUNDATION AS PART OF THE SIDEWALK. THE RESULTING SIDEWALK CLEAR WIDTH SHALL CONFORM TO THE MINIMUM ADA REQUIREMENTS.
- IN THE CASE OF POWER FAILURE, THE TRAFFIC SIGNAL SHALL HAVE AN UNINTERRUPTIBLE POWER SUPPLY, OPERATE IN FULL OPERATION MODE FOR FOUR (4) HOURS AND THEREAFTER IN FLASH MODE.
- IN CONJUNCTION WITH THE TRAFFIC SIGNAL WORK AT THIS LOCATION, MINIMUM CLEARANCE BETWEEN OVERHEAD POWER LINES AND TRAFFIC SIGNAL EQUIPMENT SHALL BE MAINTAINED BASED ON THE FOLLOWING:
 

POWER LINE VOLTAGES	LATERAL	VERTICAL
COMMUNICATION	3 FT	2 FT
SECONDARY	6 FT	6 FT
PRIMARY, 750V-50kV	10 FT	10 FT

ABOVE 50kV REFER TO NJDOT UTILITY ACCOMMODATION
- IF A CONFLICT ARISES BETWEEN THE WIRES AND THE PROPOSED EQUIPMENT, THE CONTRACTOR IS FULLY RESPONSIBLE FOR COORDINATING WITH THE UTILITY COMPANIES TO RELOCATE THE WIRES.
- THE LOCATION OF ALL EXISTING UTILITIES DEPICTED ON THE PLANS ARE TO BE APPROXIMATE AND ARE BASED ON AVAILABLE DATA. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING UTILITY LOCATIONS PRIOR TO EXCAVATION AND INFORMING THE ENGINEER OF ANY IN-FIELD ADJUSTMENTS.
- VIDEO DETECTION SHALL USE COLOR CAMERAS. NO COAXIAL CABLE ALLOWED.
- CONDUIT RUNS UNDER THE EXISTING ROADWAY (NEW DOVER ROAD AND COLONIA BOULEVARD) SHALL USE THE OPEN TRENCH CUT METHOD.
- THE INSTALLATION OF THE PRE-EMPTION GPS RECEIVER WITH THE MANUFACTURER APPROVED BRACKET, ASSOCIATED WIRES, AND COST TO INTEGRATE THE SYSTEM SHOULD ALL BE INCLUDED IN THE PRE-EMPTION CONTROL SYSTEM PAY ITEM.



REV	DATE	DRAWN BY	DESCRIPTION

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Hamilton, NJ 08601  
Phone: 609.587.8200 Fax: 609.587.8240

WOODBRIDGE TOWNSHIP

**ELECTRICAL PLAN**

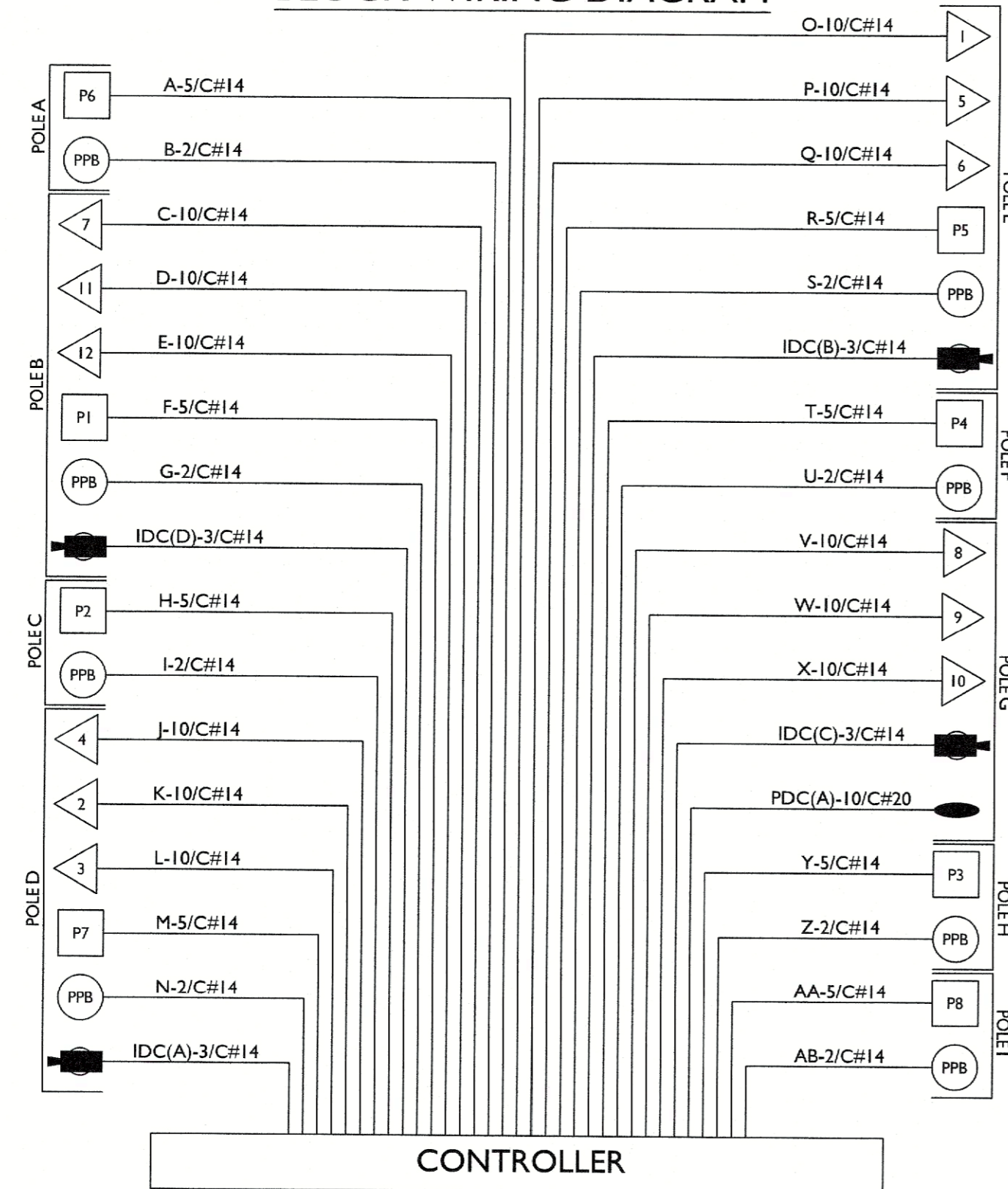
INTERSECTION IMPROVEMENTS AT  
NEW DOVER ROAD AND COLONIA BOULEVARD

WOODBRIDGE TOWNSHIP, MIDDLESEX COUNTY, NEW JERSEY

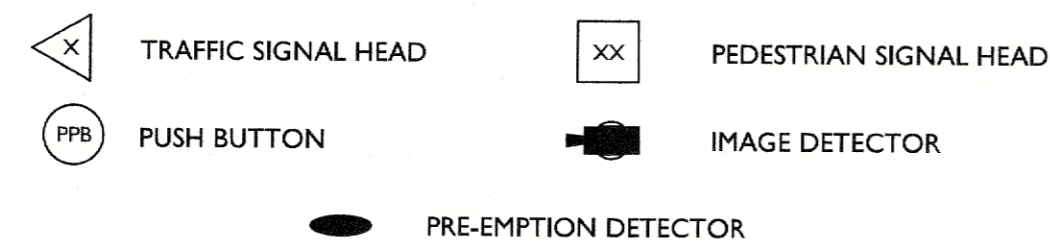
*Keith M. Hall*  
**Keith M. Hall**  
NEW JERSEY LICENSED PROFESSIONAL ENGINEER  
LICENSE NUMBER: GES2883  
COLLIERS ENGINEERING & DESIGN, INC.  
N.J. C.O.A. # 246A27986500

SCALE: AS SHOWN DATE: 12/25/2022 DRAWN BY: KGL CHECKED BY: KMH  
PROJECT NUMBER: 21007268G DRAWING NAME: R-PL16-ELEC SHEET NUMBER: 7 OF 12

**BLOCK WIRING DIAGRAM**



**LEGEND**

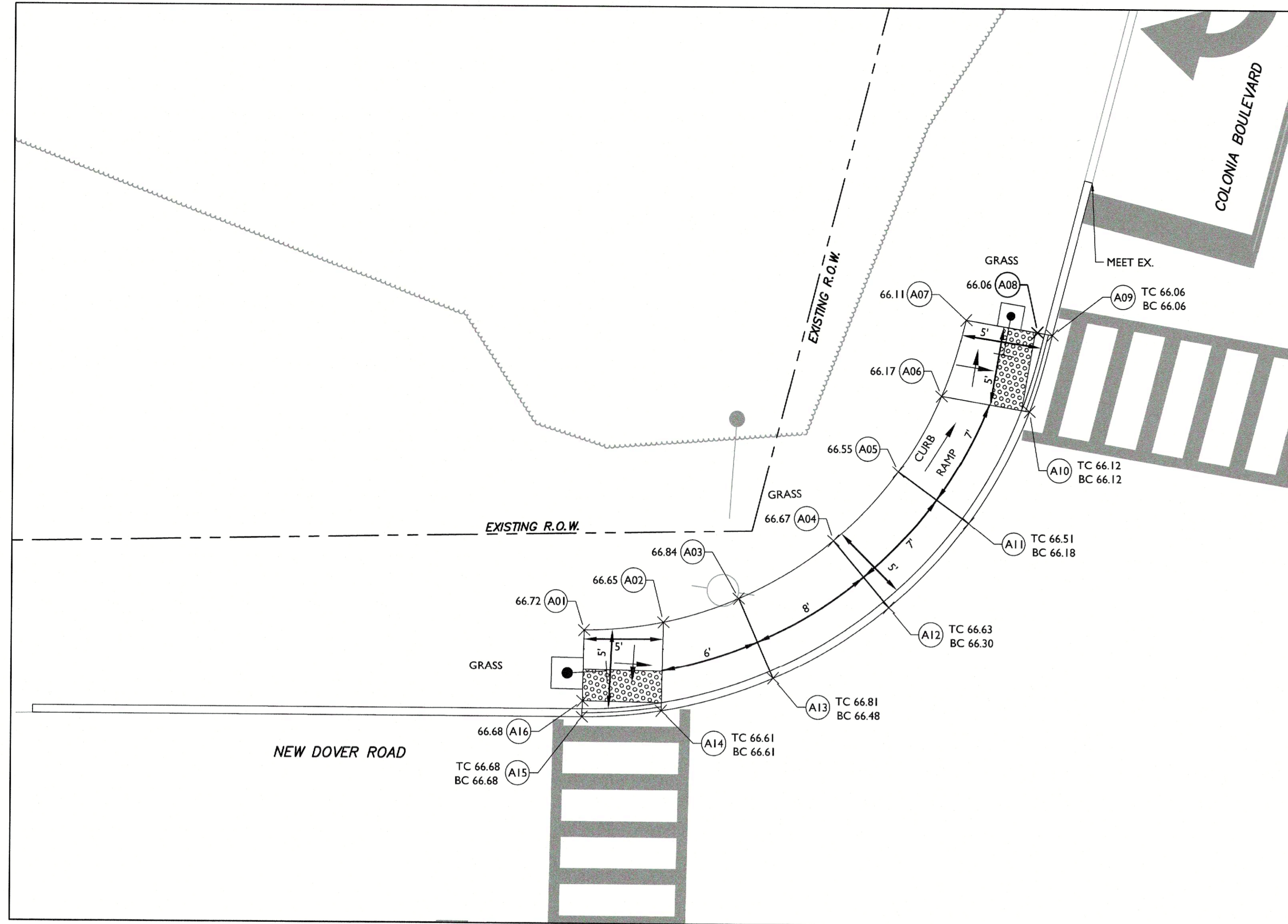


ITEM NO.	TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITY
33	MAST ARM STREET NAME SIGNS, DOUBLE-SIDED	SF	27
36	2" RIGID METALLIC CONDUIT	LF	42
37	3" RIGID METALLIC CONDUIT	LF	406
38	18" X 36" JUNCTION BOX	UNIT	6
39	FOUNDATION, TYPE P-MC MODIFIED	UNIT	1
40	FOUNDATION, TYPE SPF	UNIT	5
41	FOUNDATION, TYPE SFK	UNIT	4
42	METER CABINET, TYPE T	UNIT	1
43	GROUND WIRE, NO. 8 AWG	LF	527
44	SERVICE WIRE, NO. 6 AWG	LF	156
46	TRAFFIC SIGNAL STANDARD, ALUMINUM	UNIT	4
47	PEDESTRIAN SIGNAL STANDARD	UNIT	5
48	TRAFFIC SIGNAL MAST ARM, ALUMINUM	UNIT	4
49	TRAFFIC SIGNAL CABLE, 2 CONDUCTOR	LF	907
50	TRAFFIC SIGNAL CABLE, 5 CONDUCTOR	LF	907
51	TRAFFIC SIGNAL CABLE, 10 CONDUCTOR	LF	1,497
52	TRAFFIC SIGNAL HEAD	UNIT	12
53	PEDESTRIAN SIGNAL HEAD	UNIT	8
54	PUSH BUTTON	UNIT	8
55	IMAGE DETECTOR	UNIT	4
56	CONTROLLER TURN-ON	UNIT	1
58	CONTROLLER, 8 PHASE, WITH 18" CABINET SKIRT, WITH GENERATOR AUXILIARY CABINET AND UPS	UNIT	1
59	PRE-EMPTION CONTROL SYSTEM	LS	1

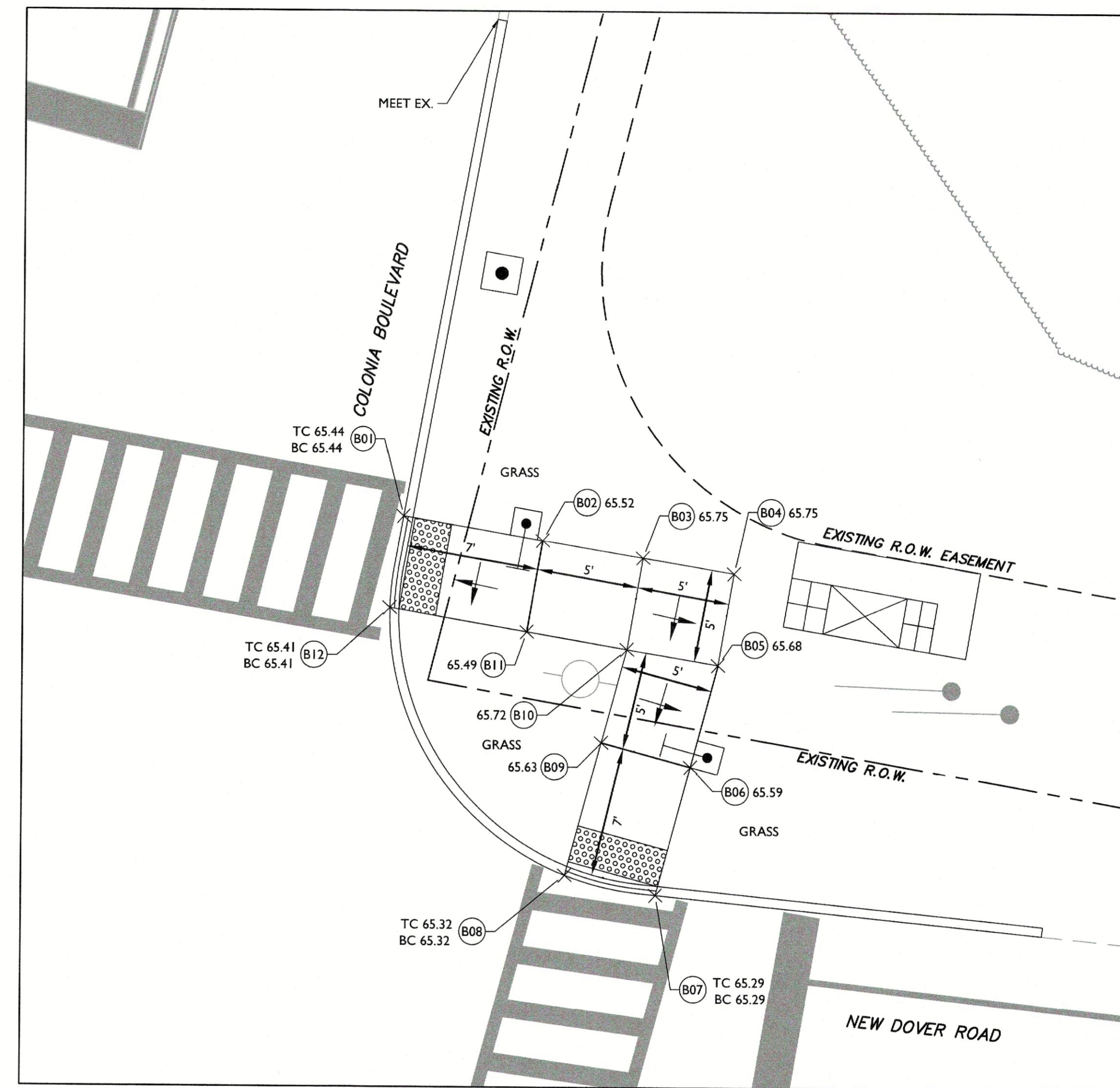
2023/12/07 09:00 AM 14.5K ELEC.dwg

F-2  
E-2

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		<p><b>ELECTRICAL PLAN</b></p> <p>INTERSECTION IMPROVEMENTS AT NEW DOVER ROAD AND COLONIA BOULEVARD</p> <p>WOODBRIDGE TOWNSHIP, MIDDLESEX COUNTY, NEW JERSEY</p>																																		
<table border="1"> <tr><td>REV</td><td>DATE</td><td>DRAWN BY</td><td>DESCRIPTION</td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table>	REV	DATE	DRAWN BY	DESCRIPTION																													<p>SCALE: AS SHOWN</p> <p>DATE: 12/5/2022</p> <p>PROJECT NUMBER: 21007268G</p> <p>SHEET NUMBER:</p>	<p>DRAWN BY: KGL</p> <p>CHECKED BY: KMH</p> <p>DRAWING NAME: R-PL16-ELEC</p>	<p>Keith M. Hall NEW JERSEY LICENSED PROFESSIONAL ENGINEER LICENSE NUMBER: G0523883 COLLIERS ENGINEERING &amp; DESIGN, INC. N.J. C.O.A. #: 24GA27986500</p>	
REV	DATE	DRAWN BY	DESCRIPTION																																	
8 OF 12		NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.																																		



CURB RAMP A



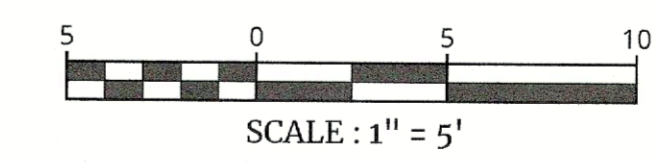
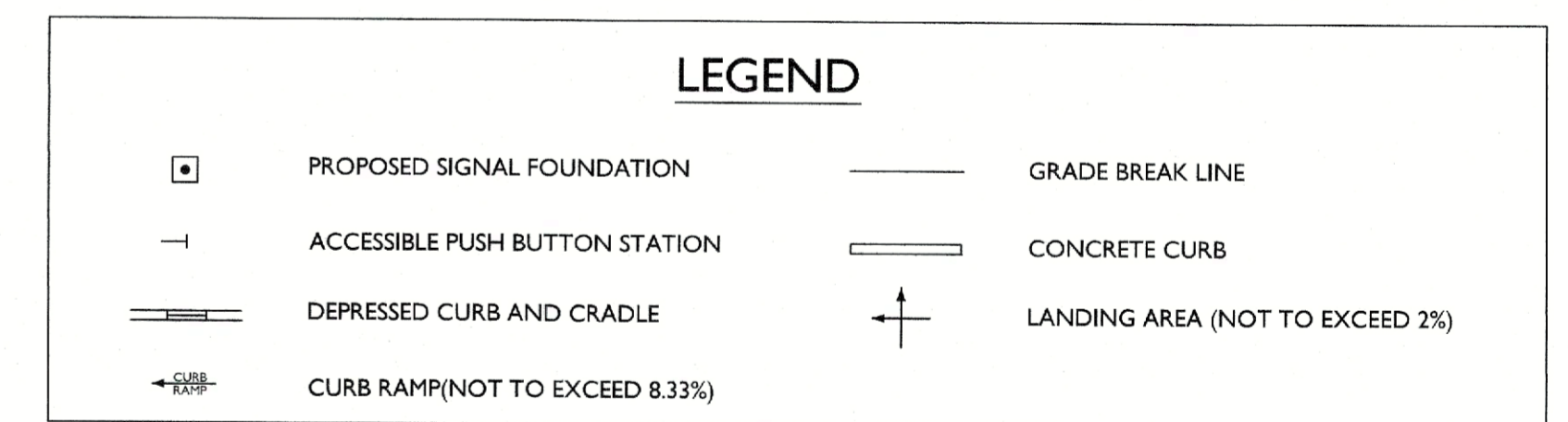
CURB RAMP B

Point Table				
Point #	Station	Offset	BC/Sidewalk Elevation	TC Elevation
A01	102+29.76	23.17 (L)	66.72	--
A02	102+34.77	23.63 (L)	66.65	--
A03	102+39.56	25.09 (L)	66.84	--
A04	102+45.56	28.70 (L)	66.67	--
A05	102+49.70	33.04 (L)	66.55	--
A06	102+52.47	37.78 (L)	66.17	--
A07	102+54.05	42.57 (L)	66.11	--
A08	102+58.54	41.74 (L)	66.06	--
A09	102+59.48	41.56 (L)	66.06	66.06
A10	102+58.00	36.75 (L)	66.12	66.12
A11	102+54.11	29.75 (L)	66.18	66.51
A12	102+49.04	24.44 (L)	66.30	66.63
A13	102+41.69	20.02 (L)	66.48	66.81
A14	102+34.60	18.02 (L)	66.61	66.61
A15	102+29.58	17.68 (L)	66.68	66.68
A16	102+29.62	18.68 (L)	66.68	--

NOTES:

- CURB RAMPS MUST BE IN STRICT CONFORMANCE TO THE "2010 ADA STANDARDS FOR ACCESSIBLE DESIGN" AND "PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY." ALL MAXIMUM SLOPES CANNOT BE EXCEEDED. THE CONTRACTOR IS RESPONSIBLE FOR POST-CONSTRUCTION SETTLEMENT AND SHOULD PROVIDE LESS THAN MAXIMUM SLOPES AS NEEDED. WHERE ELEVATION OF THE CURB RAMP AND SIDEWALK VARY DRASTICALLY IN AREAS OF THE PROPOSED RAMPS, THE CONTRACTOR IS RESPONSIBLE FOR ADJUSTING THE RAMP SIZE SO THAT SLOPE REQUIREMENTS ARE NOT EXCEEDED.
- THE RUNNING SLOPE OF A CURB RAMP SHALL BE 8.33% MAXIMUM.
- THE CROSS SLOPE OF THE CURB RAMP SHOULD BE AS FLAT AS POSSIBLE, NOT TO EXCEED 50H:IV (2%).
- THE RUNNING AND CROSS SLOPES ON LANDINGS IS 50H:IV (2%) MAXIMUM.
- SIDE FLARE RATES SHALL NOT EXCEED 10H:IV (10%).
- THE VERTICAL ALIGNMENT OF A CURB RAMP SHALL BE PLANAR. GRADE BREAKS SHALL BE FLUSH AND PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN.
- RAMP TRANSITIONS BETWEEN WALKS, LANDINGS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT VERTICAL CHANGES (1/4" MAX).
- A PEDESTRIAN ACCESS ROUTE (PAR) SHALL BE MAINTAINED ON ALL CORNERS OF THE INTERSECTION, SUCH THAT A 4' MINIMUM CONTINUOUS AND UNOBSTRUCTED WALKWAY WITHIN THE PUBLIC RIGHT-OF-WAY PEDESTRIAN CIRCULATION PATH PROVIDES ACCESSIBILITY.
- LANDINGS SHALL HAVE A MINIMUM CLEAR DIMENSION OF 4'-0" BY 4'-0" AND MAY BE SHARED BY ADJACENT RAMPS.
- THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF A CURB RAMP, LANDING, OR BLENDED TRANSITION SHALL BE 5% MAXIMUM.
- CURB RAMPS SHALL NOT BE POURED MONOLITHICALLY BUT RATHER HAVE CLEARLY DEFINED GRADE BREAKS AS SHOWN IN THE DETAILS, DELINEATED AS NECESSARY WITH EXPANSION JOINT FILLER THAT COMPLIES WITH APPLICABLE SURFACE REQUIREMENTS.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TRAFFIC CONTROL DEVICES, UTILITY LOCATIONS, SIGNS, STREET FURNITURE, AND DRAINAGE TO ENSURE A CONTINUOUS PEDESTRIAN ACCESS ROUTE AT ALL CURB RAMP LOCATIONS.
- RAMPS MUST FALL WITHIN CROSSWALK LIMITS.
- REFER TO C-1 FOR CONSTRUCTION PLAN AND E-1 FOR ELECTRICAL PLAN.
- EXPOSURE OF THE SPF AND SFK FOUNDATION SHOULD BE NO MORE THAN 2" FROM GRADE OF SIDEWALK AND 1" FROM GRADE OF GROUND SURFACE.
- REFER TO LATEST NJDOT ROADWAY CONSTRUCTION DETAIL CD-60602 FOR THE DETECTABLE WARNING SURFACE DETAIL.

Point Table				
Point #	Station	Offset	BC/Sidewalk Elevation	TC Elevation
B01	102+98.60	34.29 (L)	65.44	65.44
B02	103+05.07	33.38 (L)	65.52	--
B03	103+09.75	32.88 (L)	65.75	--
B04	103+14.04	32.53 (L)	65.75	--
B05	103+13.78	27.54 (L)	65.68	--
B06	103+13.02	21.93 (L)	65.59	--
B07	103+11.97	14.87 (L)	65.29	65.29
B08	103+07.35	15.48 (L)	65.32	65.32
B09	103+08.58	22.77 (L)	65.63	--
B10	103+09.40	27.90 (L)	65.72	--
B11	103+04.62	28.41 (L)	65.49	--
B12	102+98.11	29.32 (L)	65.41	65.41



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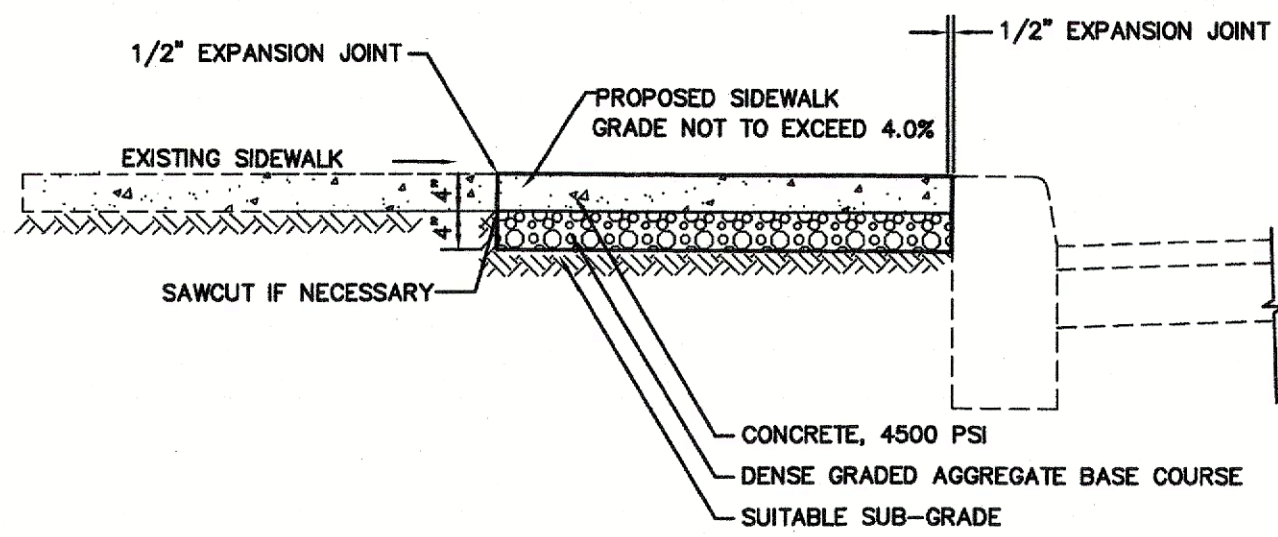
WOODBRIDGE TOWNSHIP  
CURB RAMP DETAILS  
INTERSECTION IMPROVEMENTS AT  
NEW DOVER ROAD AND COLONIA BOULEVARD  
WOODBRIDGE TOWNSHIP, MIDDLESEX COUNTY, NEW JERSEY

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SCALE: AS SHOWN	DATE: 12/5/2022	DRAWN BY: KGL	CHECKED BY: KMH
PROJECT NUMBER: 21007268G	DRAWING NAME: R-PL12-RAMP	SHEET NUMBER: 9	TOTAL SHEETS: 12



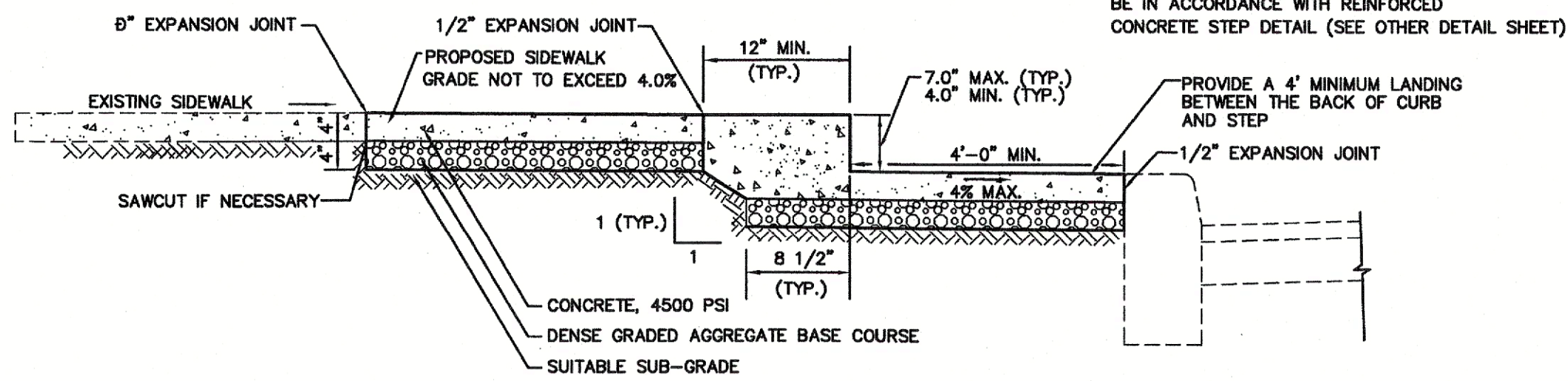




**TYPICAL SERVICE WALK REPLACEMENT DETAIL**

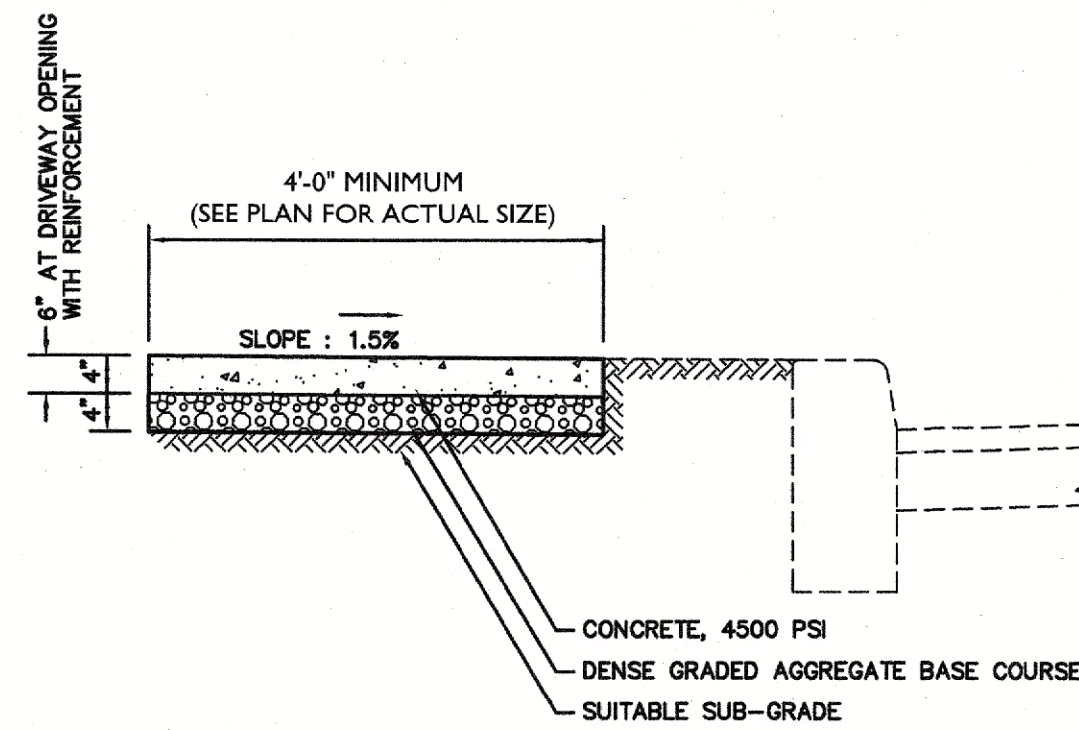
N.T.S.

- NOTE:  
 1. TWO (2) AND THREE (3) STEP INSTALLATION SHALL BE IN ACCORDANCE WITH CONCRETE STEP DETAIL (SEE OTHER DETAIL SHEET)  
 2. FOUR (4) STEPS OR GREATER SHALL BE IN ACCORDANCE WITH REINFORCED CONCRETE STEP DETAIL (SEE OTHER DETAIL SHEET)



**TYPICAL SERVICE WALK REPLACEMENT DETAIL WITH STEP**

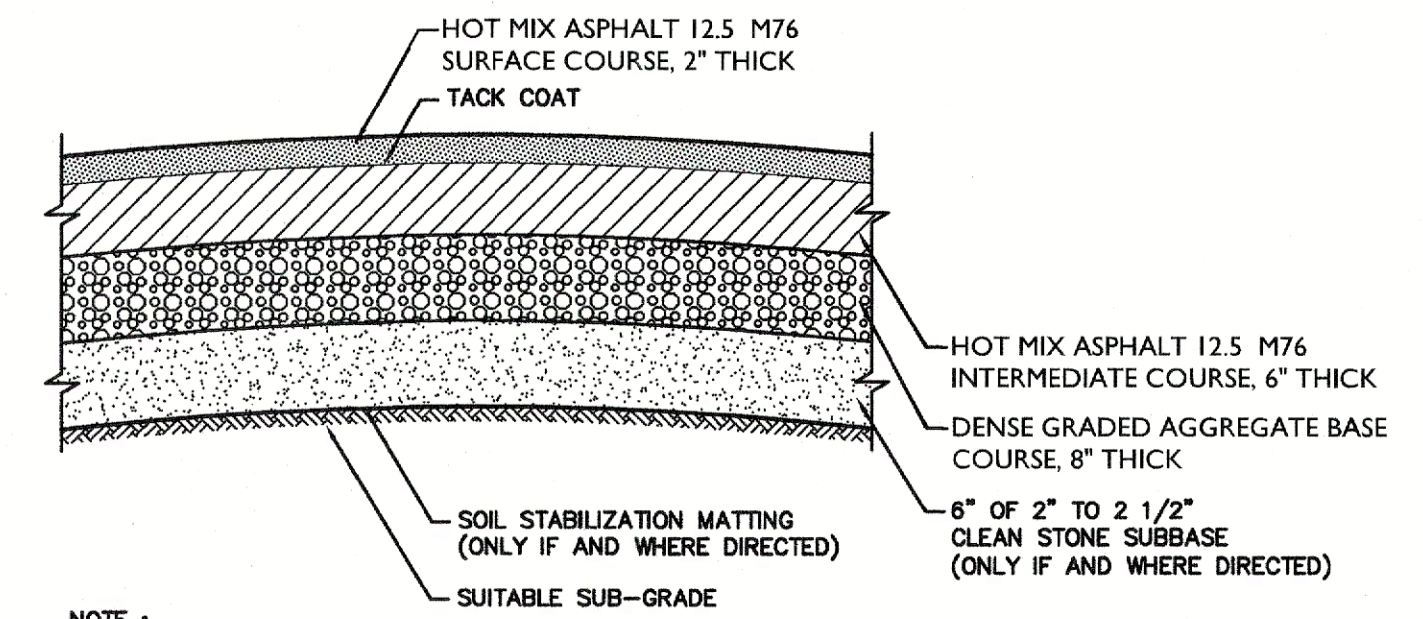
N.T.S.



**TYPICAL SIDEWALK DETAIL**

N.T.S.

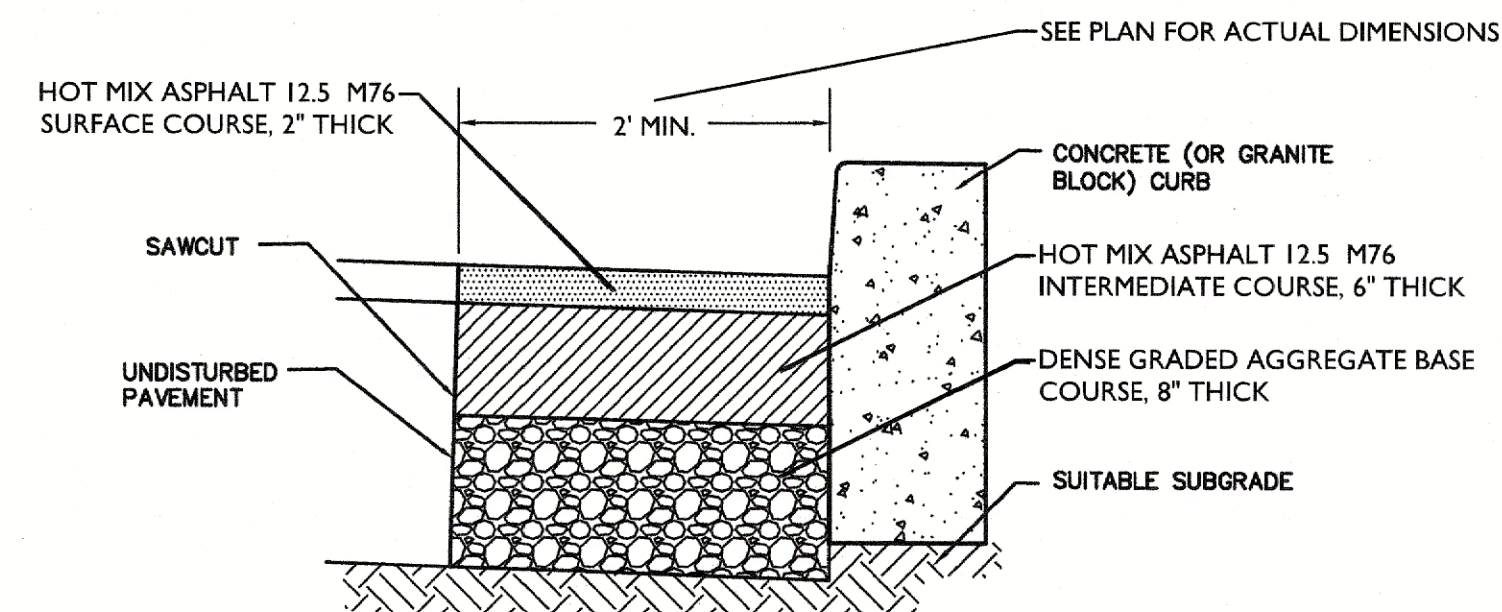
- NOTES:  
 SEE DETAILS FOR HANDICAPPED RAMP



**TYPICAL PAVEMENT DETAIL**

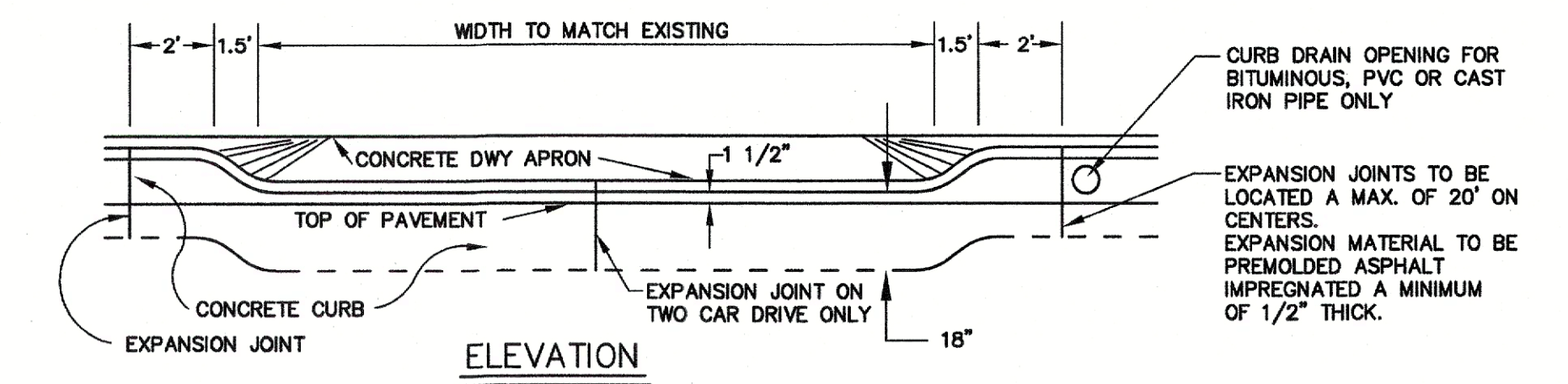
N.T.S.

- NOTE:  
 THE CROWN OF ALL PAVEMENT SHALL BE AS INDICATED ON THE CROSS SECTIONS

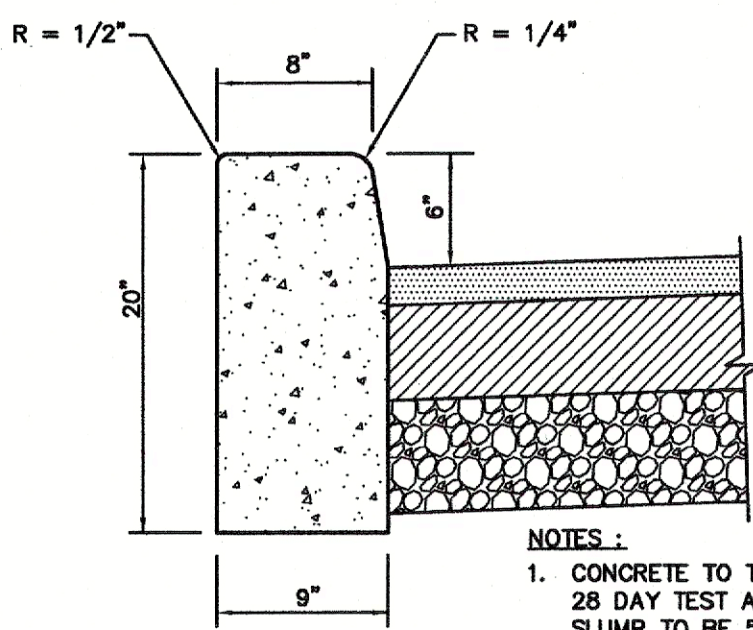


**FULL DEPTH PAVEMENT REPAIR DETAIL (NO ROAD RECONSTRUCTION)**

N.T.S.



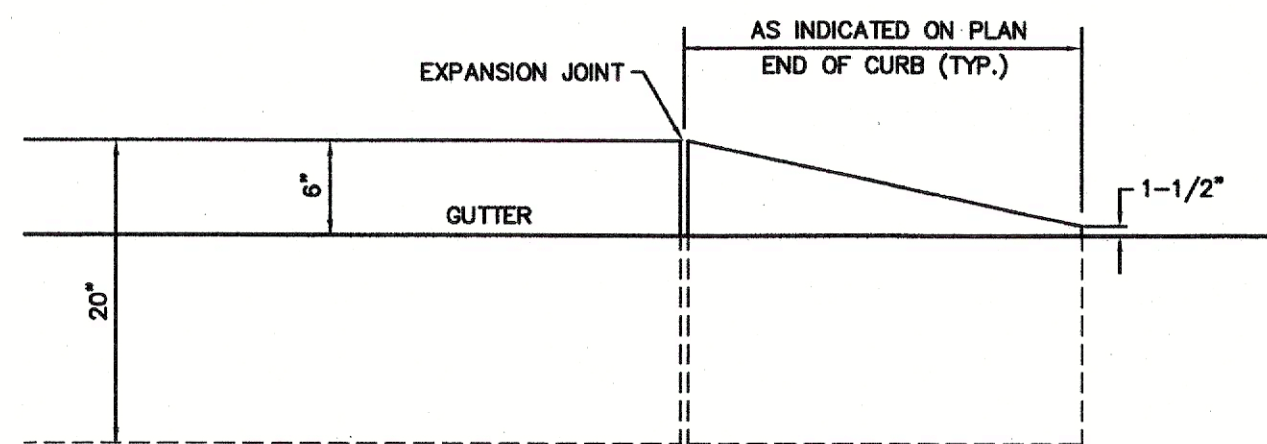
**ELEVATION**



**TYPICAL 9" x 20" CURB DETAIL**

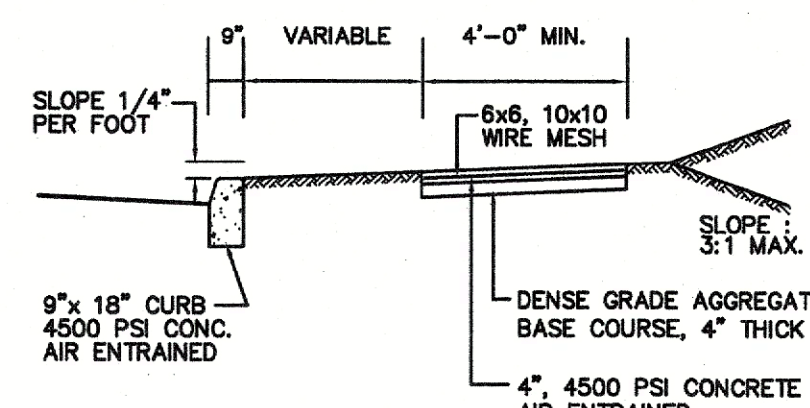
N.T.S.

- NOTES:  
 1. CONCRETE TO TEST 4500 PSI MINIMUM ON 28 DAY TEST AIR ENTRAINMENT 4% TO 7% SLUMP TO BE 5" MAXIMUM  
 2. SEE DETAILS FOR HANDICAPPED RAMP



**9" x 20" KNOCKOUT CURB**

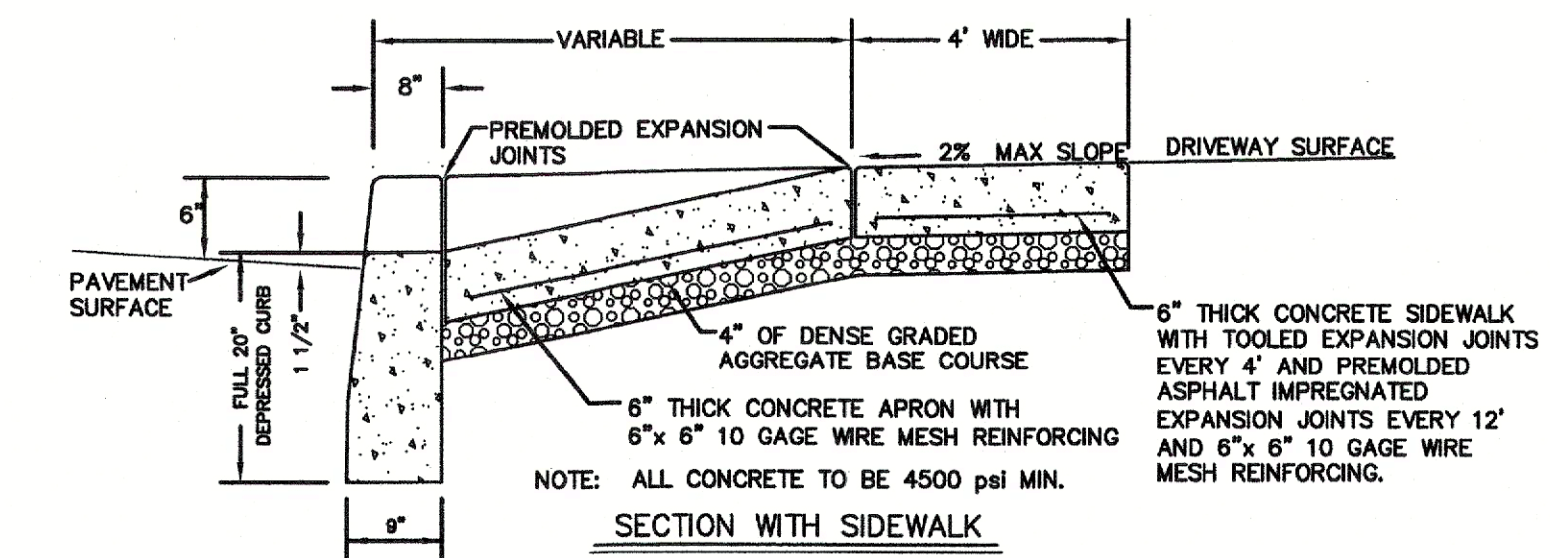
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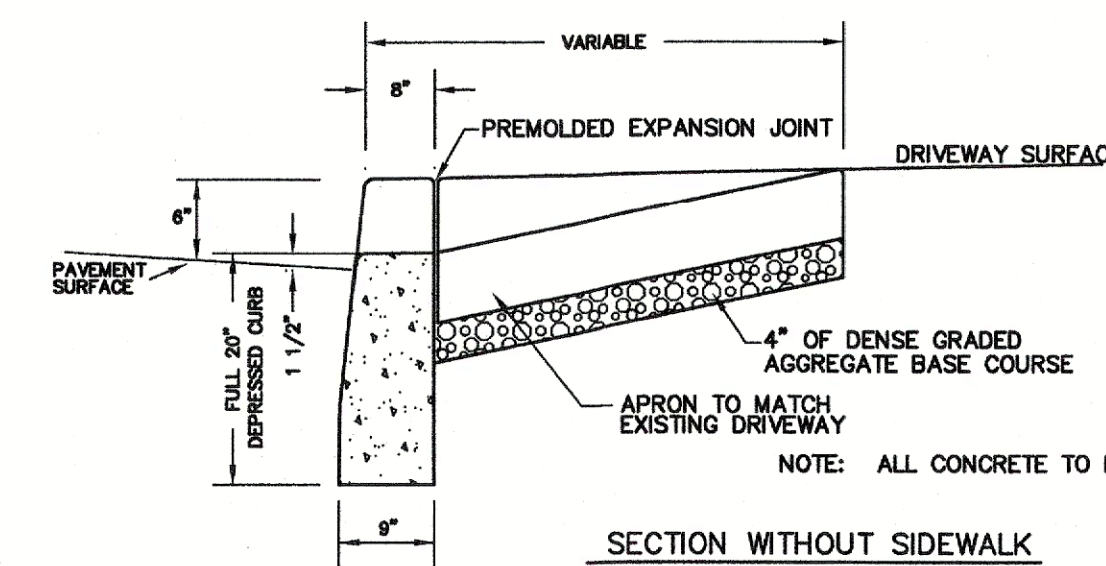
**SIDEWALK DETAIL REINFORCED COUNTY CONCRETE**

N.T.S.

- NOTE:  
 1. HANDICAP RAMPS SHALL BE REINFORCED WITH WIRE MESH. REFER TO DETAILS FOR HANDICAP RAMP CONSTRUCTION.  
 2. TRANSVERSE EXPANSION JOINTS 1/2" WIDE SHALL BE PROVIDED AT INTERVALS OF NOT MORE THAN 20' AND FILLED WITH PREFORMED BITUMINOUS CELLULAR TYPE JOINT FILLER. LONGITUDINAL JOINTS, 1/2" WIDE, SHALL BE PROVIDED BETWEEN CURBS AND ABUTTING SIDEWALKS, AND SHALL BE FILLED WITH PREFORMED BITUMINOUS TYPE JOINT FILLER. THE TOP OF ALL JOINT FILLER SHALL BE 1/2" BELOW THE TOP OF THE SIDEWALK AND FILLED WITH JOINT SEALER (SKAFLEX 1A, OR APPROVED EQUAL). NO SEPARATE PAYMENT WILL BE MADE FOR JOINT CAP, REMOVABLE JOINT STRIP, JOINT SEALER AND WELDED STEEL WIRE FABRIC PROVIDED IN CONCRETE SIDEWALKS. NO SEPARATE PAYMENT WILL BE MADE FOR DENSE GRADED AGGREGATE BASE COURSE.



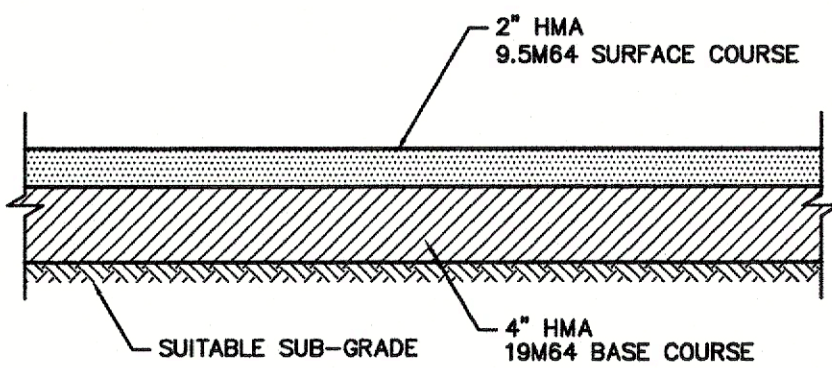
**SECTION WITH SIDEWALK**



**SECTION WITHOUT SIDEWALK**

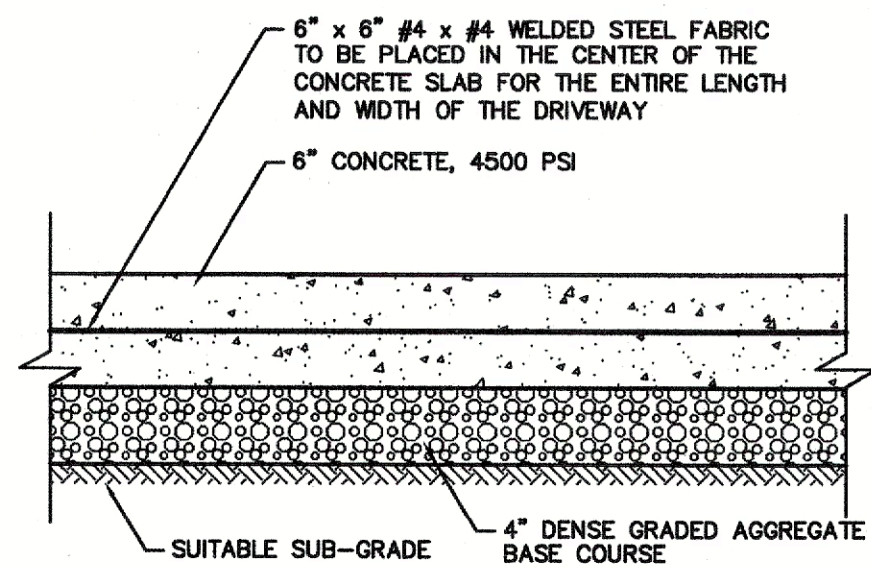
**DRIVEWAY ENTRANCE DEPRESSED CURB, DRIVEWAY APRON & SIDEWALK**

N.T.S.



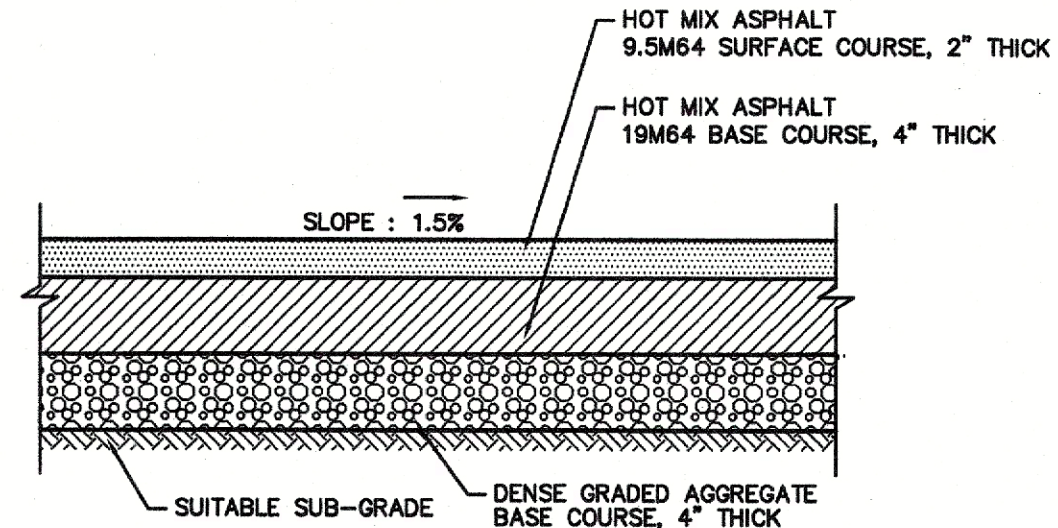
**DRIVEWAY REPLACEMENT DETAIL (COMMERCIAL DRIVEWAY & PARKING LOT)**

N.T.S.



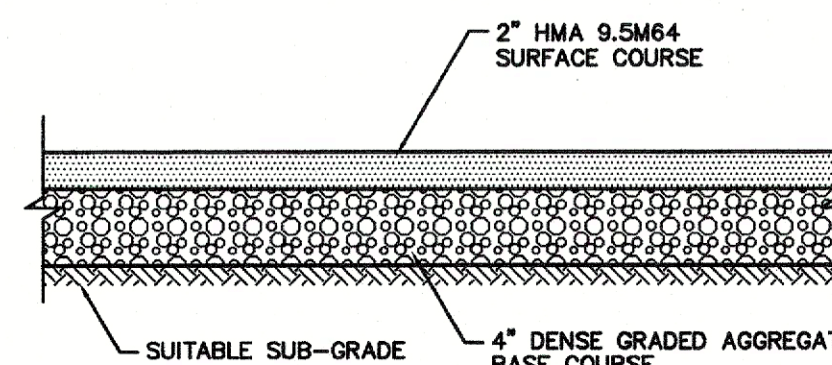
**DRIVEWAY REPLACEMENT DETAIL (CONCRETE DRIVEWAY)**

N.T.S.



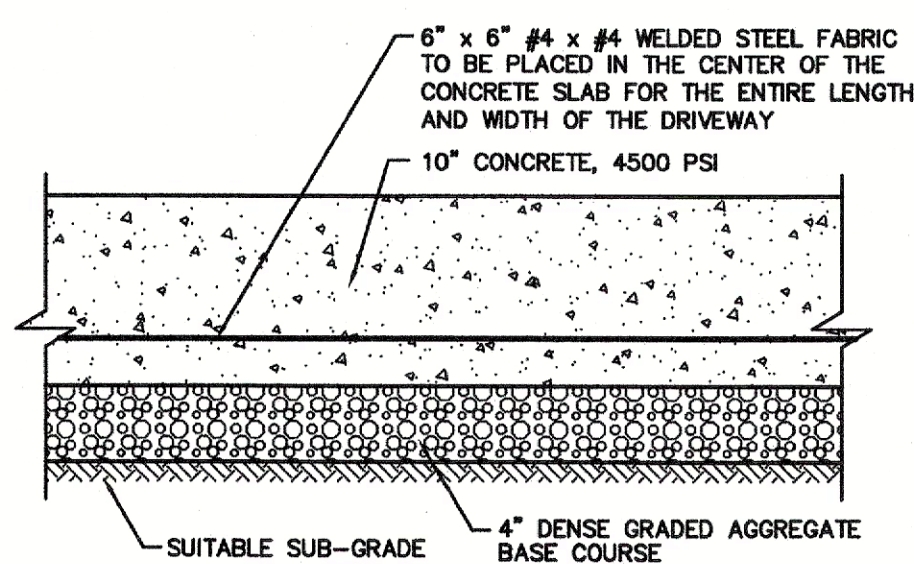
**HMA WALKWAY DETAIL**

N.T.S.



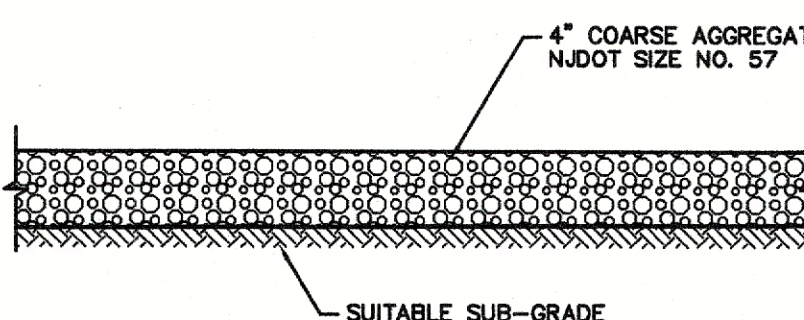
**DRIVEWAY REPLACEMENT DETAIL (SINGLE & 2-FAMILY DRIVEWAYS)**

N.T.S.



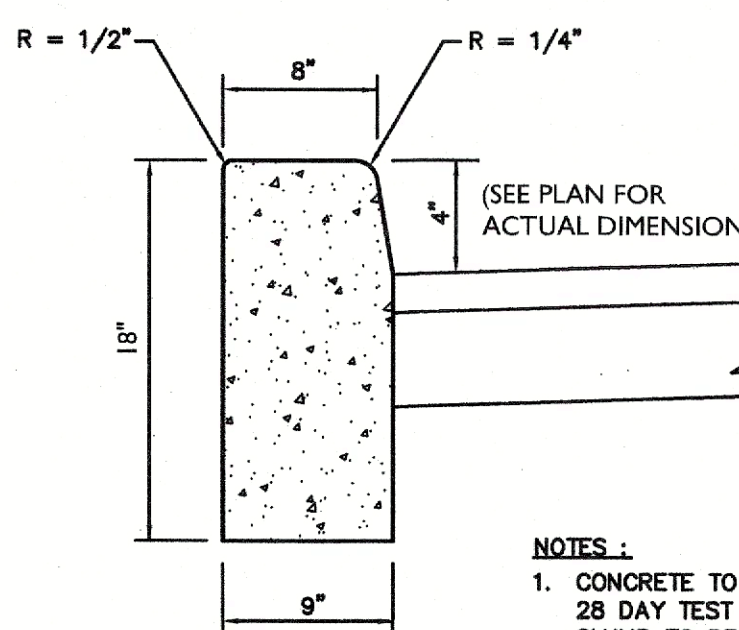
**DRIVEWAY REPLACEMENT DETAIL (COMMERCIAL DRIVEWAY & PARKING LOT)**

N.T.S.



**DRIVEWAY REPLACEMENT DETAIL (AGGREGATE DRIVEWAY)**

N.T.S.



**TYPICAL 9" x 18" CURB DETAIL**

N.T.S.

- NOTES:  
 1. CONCRETE TO TEST 4500 PSI MINIMUM ON 28 DAY TEST AIR ENTRAINMENT 4% TO 7% SLUMP TO BE 5" MAXIMUM  
 2. SEE DETAILS FOR HANDICAPPED RAMP

REV	DATE	DRAWN BY	DESCRIPTION

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WOODBRIDGE TOWNSHIP  
**CONSTRUCTION DETAILS**  
 INTERSECTION IMPROVEMENTS AT  
 NEW DOVER ROAD AND COLONIA BOULEVARD  
 WOODBRIDGE TOWNSHIP, MIDDLESEX COUNTY, NEW JERSEY

SCALE: N/A DATE: 12/5/2022 DRAWN BY: KGL CHECKED BY: KMH  
 PROJECT NUMBER: 21007268G DRAWING NAME: R-PL08-DTL5  
 SHEET NUMBER: 12 OF 12

NEW JERSEY LICENSED PROFESSIONAL ENGINEER  
 LICENSE NUMBER: GES2883  
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