

STORM DRAINAGE IMPROVEMENTS FY 2016 - VARIOUS LOCATIONS TOWNSHIP OF MAPLEWOOD ESSEX COUNTY, NEW JERSEY

TOWNSHIP OFFICIALS

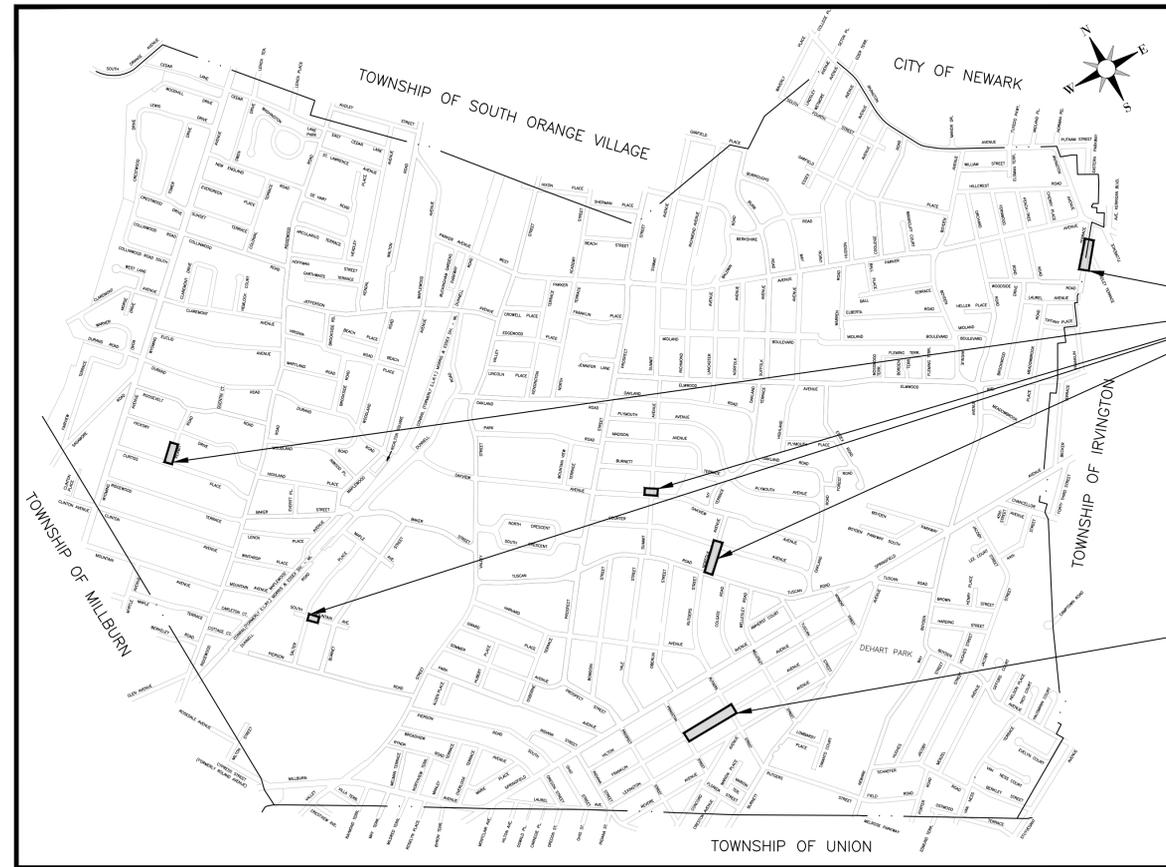
Mayor
VICTOR DELUCA
Deputy Mayor
NANCY ADAMS

Township Committee
MARLON K. BROWNLEE
INDIA LARRIER
GREG LEMBRICH

Township Administrator
JOSEPH F. MANNING

Township Clerk
ELIZABETH J. FRITZEN

Township Engineer
PAUL J. KITTNER, P.E., P.P., C.M.E.



SITE LOCATION MAP

Scale: 1" = 1,000'

BID ALTERNATES:

- ALTERNATE A - FRANKLIN TERRACE
- ALTERNATE B - SOUTH MOUNTAIN AVENUE
- ALTERNATE C - NORFOLK AVENUE
- ALTERNATE D - KERMIT ROAD
- ALTERNATE E - SUMMIT AVENUE

BASE BID - FRANKLIN AVENUE

SHEET INDEX

- SHEET 1 - COVER
- SHEET 2 - LEGEND
- SHEET 3 - QUANTITIES AND GENERAL NOTES
- SHEET 4 - CONSTRUCTION PLAN - BASE BID
- SHEET 5 - CONSTRUCTION PLAN - BID ALTERNATES
- SHEET 6 - CONSTRUCTION PLAN - BID ALTERNATES
- SHEET 7 - CONSTRUCTION PLAN - BID ALTERNATES
- SHEET 8 - TRAFFIC CONTROL DETAILS
- SHEET 9 - CONSTRUCTION DETAILS
- SHEET 10 - CONSTRUCTION DETAILS
- SHEET 11 - CONSTRUCTION DETAILS

PUBLIC UTILITIES

P.S.E.&G., Electric Division 201-365-2830
P.S.E.&G., Gas Division 973-414-1554
Verizon Communications 973-422-5146
Comcast Cable 732-602-7444
NJ American Water Company 908-431-3223



Know what's below.
Call before you dig.

NO.	DATE	REVISION	DRAWN	CHK'D	REL'D

TOWNSHIP OF MAPLEWOOD
COUNTY OF ESSEX, NEW JERSEY
574 VALLEY STREET, MAPLEWOOD, NJ 07040
Ph. 973.762.8120 F. 973.762.2894



Paul J. Kittner Jr.
PAUL J. KITTNER JR.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. NO. 24GE04250500

ENGINEERING DEPARTMENT
TOWNSHIP OF MAPLEWOOD
ESSEX COUNTY
NEW JERSEY

STORM DRAINAGE IMPROVEMENTS
FY 2016 - VARIOUS LOCATIONS
COVER SHEET

Job No. 2016-002

Scale: AS SHOWN

Drawn ADG	Designed ADG/PJK
Checked ADG/PJK	Released PJK

Date 8/5/16	Drawer # TBD
----------------	-----------------

SHEET No. 1
OF 11

LINEAR FEATURES

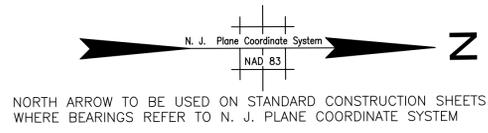
EXISTING	PROPOSED	
		WATER MAIN (SIZE)
		GAS MAIN (SIZE)
		TELEPHONE CONDUIT
		ELECTRIC CONDUIT (HIGHWAY OR UTILITY)
		CABLE TV
		FIBER OPTIC
		SANITARY SEWERS
		STORM DRAINS
		PAVEMENTS (CONCRETE OR BITUMINOUS)
		SHOULDERS
		CURBS
		SLOPES (CUT & FILL)
		BASE LINE
		TWP., CITY, COUNTY LINES
		RIGHT OF WAY LINES (ACCESS PERMITTED)
		EASEMENTS
		GRADING LIMITS
		PROPERTY LINE
		FENCE (SIZE & TYPE)
		RESET FENCE
		BEAM GUIDE RAIL
		WETLAND LIMIT LINE
		SILT FENCE
		DITCHES
		RAILROAD TRACKS
		TREE LINE

TOPOGRAPHICAL FEATURES

EXISTING	PROPOSED	
		INLETS (LABEL TYPE)
		INLETS (TYPE ES)
		MANHOLES (LABEL TYPE OR UTILITY)
		RECONSTRUCT (INLETS OR MANHOLES)
		RESET (INLETS OR MANHOLES)
		R.C. END SECTION OR C.M. HEADWALL
		HEADWALLS
		HEADWALLS & APRONS
		WATER GATE VALVES/METER
		RESET WATER GATE VALVES
		GAS VALVES
		RESET GAS GATE VALVES
		GAS BOX
		HYDRANTS
		RESET HYDRANTS
		UTILITY POLE (TYPE & NUMBER)
		TEMPORARY UTILITY POLE
		TRAFFIC SIGNAL
		JUNCTION BOX
		FIBER OPTIC JUNCTION BOX
		JUNCTION BOX FOUNDATION
		SIGNS
		VERTICAL PANELS
		GUIDE RAIL END TERMINALS
		BEAM GUIDE RAIL ANCHORAGES
		TRAFFIC SIGNAL

TOPOGRAPHICAL FEATURES

EXISTING	PROPOSED	
		MONUMENTS
		ROW MONUMENT (ROW CONTROL POINTS)
		TEST PIT
		BORINGS (BORING NUMBER)
		DECIDUOUS TREE (SIZE, KIND)
		EVERGREENS
		BUSH
		HEDGES
		SWAMP
		TRAFFIC BOX
		TRAFFIC SIGNAL
		GUY WIRE
		LIGHT POLE
		VALVE
		SPOT ELEVATION



MISCELLANEOUS SYMBOLS

	ITEMS WITH NO ALTERNATE
	ALTERNATE ITEMS OR FOR ALTERNATE PIPE ITEMS (C) = CONCRETE (M) = METAL
	PROPOSED 2" MILL AND OVERLAY CONSTRUCTION
	PROPOSED SIDEWALK, 4" THICK
	BASE REPAIR (IF AND WHERE DIRECTED)
	DRIVEWAY RESTORATION (IF AND WHERE DIRECTED)
	TREE & SHRUB REMOVAL
	LEVEL LINE
	HIGH POINT
	LOW POINT
	BENCH MARK
	INLET PROTECTION
	23.01 BLOCK
	56 LOT
	17 HOUSE ADDRESS

ABBREVIATIONS USED IN THIS CONTRACT:

AH., BK.	AHEAD, BACK	J.B.	JUNCTION BOX	PVC, P.V.C.	POLYVINYL CHLORIDE PIPE,	STY.	STORY
.B.L.	BASELINE	LT., RT.	LEFT, RIGHT	PVI, P.V.I.	POINT OF VERTICAL CURVATURE	T	TANGENT
B.M.	BENCH MARK	L.O.P.	LIMIT OF PAVEMENT (PAVING)	PVT, P.V.T.	POINT OF VERTICAL INTERSECTION	TBA	TO BE ABANDONED
B.T.	BELL TELEPHONE	L.O.M.	LIMIT OF MILLING	R	POINT OF VERTICAL TANGENCY, PAVEMENT	TBR	TO BE REMOVED
BIT., BITUM.	BITUMINOUS	M.B.	MAILBOX	RADIUS	RADIUS	TEL.	TELEPHONE
BLDG.	BUILDING	M.P.	MILE POST	RCCP, R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE	TEMP.	TEMPORARY
.C.L.	CENTERLINE	MAX.	MAXIMUM	RCEP, R.C.E.P.	REINFORCED CONCRETE ELLIPTICAL PIPE	THK., TH.	THICK
C.I.P.	CAST IRON PIPE	MIN.	MINIMUM	RCP, R.C.P.	REINFORCED CONCRETE PIPE	TYP.	TYPICAL
C.M.P.	CORRUGATED METAL PIPE	NO.	NUMBER	RMC, R.M.C.	RIGID METALLIC CONDUIT	U.D.	UNDERDRAIN
CONC.	CONCRETE	N.T.S.	NOT TO SCALE	RNMC, R.N.M.C.	RIGID NON-METALLIC CONDUIT	UP, U.P.	UTILITY POLE
CULV.	CULVERT	PAV'T.	PAVEMENT	ROW, R.O.W.	RIGHT OF WAY	VAR.	VARIABLE, VARIES
DIA.	DIAMETER	PERF.	PERFORATED	R.R.	RAILROAD	W.C.V.C.	WHITE CONCRETE VERTICAL CURB
D.C.	DROP CURB	P.G.L.	PROFILE GRADE LINE	RT., RT.	ROUTE	WM	WATER METER
DE	DITCH EXCAVATION	.P.L.	PROPERTY LINE, PROFILE LINE	SAN.	SANITARY	X-SECT	CROSS SECTION
DEP., DP	DEPRESSED CURB	PK	PARKER KAYLON MASONRY NAIL	SDWK.	SIDEWALK		
DH	DRILL HOLE	POC, P.O.C.	POINT ON CURVE	S.H.D.	STATE HIGHWAY DEPARTMENT		
DWY	DRIVEWAY	POL, P.O.L.	POINT ON LINE	SHLD.	SHOULDER		
DWS	DETECTABLE WARNING SURFACE	POT, P.O.T.	POINT ON TANGENT	.S.L.	SURVEY LINE		
E.B., W.B., N.B., S.B.	EASTBOUND, WESTBOUND NORTHBOUND, SOUTHBOUND	PRC, P.R.C.	POINT OF REVERSE CURVE	S.O.D.	SUBBASE OUTLET DRAIN		
EL., ELEV.	ELEVATION	PROP.	PROPOSED				
EXIST.	EXISTING	PT, P.T.	POINT OF TANGENCY				
G.	GRADE						
GBC	GRANITE BLOCK CURB						
GR.	GRATE						
HT.	HEIGHT						
H.W.	HEADWALL						
HYD.	HYDRANT						
INV.	INVERT						
I.P.	IRON PIN						

TOWNSHIP OF MAPLEWOOD
 COUNTY OF ESSEX, NEW JERSEY
 574 VALLEY STREET, MAPLEWOOD, NJ 07040
 Ph. 973.762.8120 F. 973.762.2894

PAUL J. KITTNER JR.
 NEW JERSEY PROFESSIONAL ENGINEER
 LIC. NO. 24GE04250500

ENGINEERING DEPARTMENT
 TOWNSHIP OF MAPLEWOOD
 ESSEX COUNTY
 NEW JERSEY

STORM DRAINAGE IMPROVEMENTS
 FY 2016 - VARIOUS LOCATIONS
 LEGEND SHEET

Job No. 2016-002
 Scale: NTS
 Drawn ADG Designed ADG/PJK
 Checked ADG/PJK Released PJK
 Date 8/2/16 Drawer # TBD
 SHEET No. 2
 OF 11



CONSTRUCTION NOTES

BASE BID - FRANKLIN AVENUE			
Item #	Description	Quantity	Unit
1	Mobilization	1	LS
2	Clearing Site	1	LS
3	Soil Erosion & Sediment Control	1	LS
4	Traffic Control	1	LS
5	Earth Excavation for Test Pits (If and Where Directed)	30	CY
6	Concrete Curb, 9"x18"	80	LF
7	Concrete Sidewalk, 4" Thick	40	SY
8	Detectable Warning Surface	8	SY
9	3" Sch. 80 PVC - Sump Pump Extension with Cleanouts	40	LF
10	12" Perforated HDPE Pipe	500	LF
11	New Type 'B' Inlet with Bicycle Safe Grate and Type 'N' Eco - Phase II Head	2	UNIT
12	Reconstruct Type 'B' Inlet with New Bicycle Safe Grate and Type 'N' Eco - Phase II Head	4	UNIT
13	Allowance for Stormwater Repairs/Redesign (If and Where Directed)	1	LS

ALTERNATE A - FRANKLIN TERRACE			
Item #	Description	Quantity	Unit
1	Mobilization	1	LS
2	Clearing Site	1	LS
3	Soil Erosion & Sediment Control	1	LS
4	Traffic Control	1	LS
5	Police Traffic Director	16	Man-Hr
6	Camera Inspection of Storm Lines	1	LS
7	Earth Excavation for Test Pits (If and Where Directed)	10	CY
8	Concrete Curb, 9"x18"	20	LF
9	Concrete Sidewalk, 4" Thick	10	SY
10	Roadway Milling and HMA Overlay, 2" Thick	180	SY
11	15" Reinforced Concrete Pipe	25	LF
12	Reconstruct Manhole with New Frame and Cover	2	UNIT
13	New Type 'B' Inlet with Bicycle Safe Grate and Type 'N' Eco - Phase II Head	1	UNIT
14	Reconstruct Type 'B' Inlet with New Bicycle Safe Grate and Type 'N' Eco - Phase II Head	2	UNIT

ALTERNATE B - SOUTH MOUNTAIN AVENUE			
Item #	Description	Quantity	Unit
1	Mobilization	1	LS
2	Clearing Site	1	LS
3	Soil Erosion & Sediment Control	1	LS
4	Traffic Control	1	LS
5	Earth Excavation for Test Pits (If and Where Directed)	10	CY
6	Concrete Curb, 9"x18"	30	LF
7	Concrete Sidewalk, 4" Thick	20	SY
8	Detectable Warning Surface	2	SY
9	Roadway Milling and HMA Overlay, 2" Thick	115	SY
10	3" Sch. 80 PVC - Sump Pump Extension with Cleanouts	5	LF
11	12" Perforated HDPE Pipe	70	LF
12	New Type 'B' Inlet with Bicycle Safe Grate and Type 'N' Eco - Phase II Head	1	UNIT
13	Reconstruct Type 'B' Inlet with New Bicycle Safe Grate and Type 'N' Eco - Phase II Head	1	UNIT

ALTERNATE C - NORFOLK AVENUE			
Item #	Description	Quantity	Unit
1	Mobilization	1	LS
2	Clearing Site	1	LS
3	Soil Erosion & Sediment Control	1	LS
4	Traffic Control	1	LS
5	Police Traffic Director	32	Man-Hr
6	Camera Inspection of Storm Lines	1	LS
7	Earth Excavation for Test Pits (If and Where Directed)	30	CY
8	Concrete Curb, 9"x18"	60	LF
9	Concrete Sidewalk, 4" Thick	40	SY
10	Detectable Warning Surface	4	SY
11	3" Sch. 80 PVC - Sump Pump Extension with Cleanouts	20	LF
12	12" Perforated HDPE Pipe	400	LF
13	New Type 'B' Inlet with Bicycle Safe Grate and Type 'N' Eco - Phase II Head	1	UNIT
14	Reconstruct Type 'B' Inlet with New Bicycle Safe Grate and Type 'N' Eco - Phase II Head	2	UNIT

ALTERNATE D - KERMIT ROAD			
Item #	Description	Quantity	Unit
1	Mobilization	1	LS
2	Clearing Site	1	LS
3	Soil Erosion & Sediment Control	1	LS
4	Traffic Control	1	LS
5	Camera Inspection of Storm Lines	1	LS
6	Earth Excavation for Test Pits (If and Where Directed)	10	CY
7	Granite Block Curb	30	LF
8	Concrete Sidewalk, 4" Thick	20	SY
9	Detectable Warning Surface	2	SY
10	12" Perforated HDPE Pipe	200	LF
11	Reconstruct Type 'B' Inlet with New Bicycle Safe Grate and Type 'N' Eco - Phase II Head	2	UNIT
12	Reconstruct Type 'A' Inlet with New Bicycle Safe Grate	1	UNIT

ALTERNATE E - SUMMIT AVENUE			
Item #	Description	Quantity	Unit
1	Mobilization	1	LS
2	Clearing Site	1	LS
3	Soil Erosion & Sediment Control	1	LS
4	Traffic Control	1	LS
5	Concrete Curb, 9"x18"	60	LF
6	Concrete Sidewalk, 4" Thick	40	SY
7	Detectable Warning Surface	4	SY
8	Roadway Milling and HMA Overlay, 2" Thick	30	SY
9	Reconstruct Type 'B' Inlet with New Bicycle Safe Grate and Type 'N' Eco - Phase II Head	3	UNIT

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE LOCAL POLICE DEPARTMENT FOR TRAFFIC OPERATIONS AND PARKING PROHIBITIONS DURING CONSTRUCTION. IN ACCORDANCE WITH THE APPROVED TRAFFIC CONTROL PLAN, CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING ORGANIZED BY THE OWNER (MAPLEWOOD TOWNSHIP) PRIOR TO CONSTRUCTION.
- ANY DAMAGE TO UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR, AND ALL COSTS FOR REPAIRS SHALL BE BORNE BY THE CONTRACTOR.
- ALL DISTURBED SHRUBS, FENCING, SIGNS, MAIL BOXES, DRIVES, ETC., SHALL BE RESTORED TO THEIR ORIGINAL CONDITION UNLESS SPECIFIED ELSEWHERE.
- ALL PROPERTY CORNERS, MONUMENTS, OR PINS REMOVED DURING CONSTRUCTION SHALL BE REPLACED BY A NEW JERSEY LICENSED LAND SURVEYOR, AT NO ADDITIONAL COST TO THE OWNER.
- ALL EXISTING UTILITY CASTINGS, COVERS AND GRATES TO BE REPLACED ARE THE PROPERTY OF THE MUNICIPALITY AND WILL BE DELIVERED TO THE DEPARTMENT OF PUBLIC WORKS. PAYMENT WILL NOT BE MADE FOR THE NEW UTILITY CASTINGS, COVERS OR GRATES UNLESS THE OLD ONES ARE RETURNED.
- INLET AND MANHOLE RIMS SHALL NOT BE RAISED MORE THAN 2 DAYS PRIOR TO APPLICATION OF FINAL SURFACE COURSE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS NECESSARY FOR CONSTRUCTION IN ACCORDANCE WITH EXISTING LOCAL, COUNTY, OR STATE REGULATIONS, OR ANY OTHER AGENCY HAVING JURISDICTION IN THESE MATTERS.
- THE CONTRACTOR SHALL ALSO PROVIDE AND MAINTAIN RAMPS AROUND ALL EXPOSED CASTINGS, BOTH PUBLIC AND PRIVATE, WHICH HAVE BEEN UNCOVERED OR RESET DURING CONSTRUCTION.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO MAINTAIN DUST CONTROL AS REQUIRED OR DIRECTED BY THE ENGINEER. ALL VEHICLES SHALL BE CLEAN AND ALL ROADWAYS SHALL BE MAINTAINED AS DIRECTED BY THE ENGINEER.
- ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFIRM TO THE STANDARDS OF THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
- THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2007 EDITION, AS PUBLISHED BY THE NEW JERSEY STATE HIGHWAY DEPARTMENT, THE PLANS, TECHNICAL SPECIFICATIONS, ADVERTISEMENT, CONTRACTOR'S PROPOSAL, AND INCLUDING BUT NOT LIMITED TO THE AMENDMENT CONTAINED HEREINAFTER SHALL COMPRISE THE CONTRACT.
- THE CONTRACTOR IS TO REFER TO THE SUPPLEMENTAL SPECIFICATION, WHICH INDICATES WHEN THE STANDARD SPECIFICATIONS, AND/OR THE AMENDMENTS THAT FOLLOW SHOULD APPLY.
- THE CONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDINANCES, RULES, ORDERS AND REGULATIONS RELATING TO THE PERFORMANCE OF THE WORK, THE PROTECTION OF ADJACENT PROPERTY AND THE MAINTENANCE OF PASSAGEWAYS.
- NO CONSTRUCTION, MAINTENANCE OR UTILITY WORK ON, UNDER OR ABOVE THE PROJECT ROAD THAT WILL OBSTRUCT, INTERFERE WITH AND/OR DETOUR TRAFFIC ON THE ROAD. THE ROAD SHALL BE OPEN TO TRAFFIC AT ALL TIMES. WORK SHALL NOT BE PERFORMED BEFORE THE HOURS OF 7:00 AM OR AFTER 5:00 PM. THE CONTRACTOR'S WORK HOURS SHALL CONFIRM TO LOCAL ORDINANCE. THE CONTRACTOR SHALL NOT DEVIATE FROM THE ABOVE WORK HOURS WITHOUT OBTAINING WRITTEN PERMISSION FROM THE CHIEF OF POLICE PRIOR TO THE START OF CONSTRUCTION.
- EACH AND EVERY PROVISION OF LAW AND CLAUSE REQUIRED BY LAW TO BE INSERTED IN THIS CONTRACT SHALL BE DEEMED TO BE INSERTED HEREIN AND THE CONTRACT SHALL BE READ AND ENFORCED AS THOUGH IT WERE INCLUDED HEREIN, AND IF THROUGH MISTAKE OR OTHERWISE AND SUCH PROVISION IS NOT INSERTED, OR IS NOT CURRENTLY INSERTED, THEN UPON THE APPLICATION OF EITHER PARTY THE CONTRACT SHALL FORTHWITH BE PHYSICALLY AMENDED TO MAKE SUCH INSERTION OR CORRECTION.
- THE CONTRACTOR WILL BE FURNISHED WITH UP TO THREE (3) SETS OF PLANS AND SPECIFICATIONS. ONE (1) COPY OF THE PLANS AND SPECIFICATIONS FURNISHED TO THE CONTRACTOR MUST BE KEPT CONSTANTLY ON THE PROJECT ON THE PROJECT SITE. ANYTHING SHOWN ON THE PLANS AND NOT MENTIONED IN THE SPECIFICATIONS, OR MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE PLANS, AND ALL WORK AND MATERIALS NECESSARY FOR THE COMPLETION OF THE WORK ACCORDING TO THE INTENT AND MEANING OF THE CONTRACT DOCUMENTS, SHALL BE FURNISHED, PERFORMED AND DONE, AS IF THE SAME WERE BOTH MENTIONED IN THE SPECIFICATIONS AND SHOWN ON THE DRAWINGS. ANY CONFLICT OR INCONSISTENCY BETWEEN THE PLANS AND SPECIFICATIONS, OR ANY DISCREPANCY BETWEEN THE FIGURES AND SCALE OF DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER WHOSE DECISION THEREON SHALL BE CONCLUSIVE. THE DECISION OF THE ENGINEER AS TO WHICH SPECIFICATION WILL GOVERN WILL BE CONCLUSIVE AND FINAL.
- IN THE EVENT THE MEANING OF ANY PORTION OF THE SPECIFICATIONS OR DRAWINGS OR ANY SUPPLEMENTARY DRAWINGS OR INSTRUCTIONS OF THE ENGINEER IS DOUBTFUL, THE SAME SHALL BE UNDERSTOOD TO CALL FOR THE BEST TYPE OF CONSTRUCTION, BOTH AS TO MATERIALS AND WORKMANSHIP, WHICH REASONABLY CAN BE INTERPRETED.
- IN THE EVENT A SITUATION ARISES IN WHICH MATERIALS NOT SPECIFIED ON THE PLANS OR INDICATED IN THE SUPPLEMENTAL SPECIFICATIONS ARE TO BE USED FOR EXTRA WORK, THEN THE STANDARD SPECIFICATIONS OR THE SUPPLEMENTS WHICHEVER GOVERNS, WILL BE USED.
- THE CONTRACTOR'S ATTENTION IS SPECIFICALLY DIRECTED TO SPECIFICATIONS, WHICH REQUIRE THAT HE POST A PERFORMANCE BOND BASED UPON THE FINAL CONTRACT AMOUNT, UPON COMPLETION AND ACCEPTANCE OF THE IMPROVEMENTS, THE CONTRACTOR SHALL ALSO POST A 2-YEAR 15% MAINTENANCE BOND BASED UPON THE FINAL PROJECT AMOUNT.
- THE GENERAL CONDITIONS OF THE CONTRACT INDICATE THAT THE CONTRACTOR MUST NOTIFY THE ENGINEER OF ANY INTENDED OVERTIME WORK PRIOR TO PERFORMING THE WORK. OVERTIME WORK SHALL BE BORNE BY THE CONTRACTOR UNLESS DIRECTED OTHERWISE IN WRITING BY THE TOWNSHIP ENGINEER.
- THE ENGINEERING DEPARTMENT MUST BE GIVEN ONE (1) WEEK NOTICE BEFORE THE START OF THE WORK.
- ALL TRENCHES UNLESS OTHERWISE INDICATED IN THE SPECIFICATIONS AND/OR AMENDED, SHALL HAVE BACKFILL MATERIAL INSTALLED AS SPECIFIED IN THE SUPPLEMENTAL SPECIFICATIONS. THE ENGINEER AT HIS DISCRETION MAY PERMIT THE USE OF EXCAVATED OR OTHER SUITABLE MATERIAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSABLE OF ALL EXCESS MATERIALS EXCAVATED OR WHATEVER NATURE AT HIS OWN EXPENSE AND IN ACCORDANCE WITH ALL APPLICABLE LAWS. THE TOWNSHIP IS NOT OBLIGATED TO SUPPLY A DISPOSAL SITE. THE CONTRACTOR MUST NOT DEPOSIT THE EXCESS MATERIALS IN THE TOWNSHIP LIMITS WITHOUT EXPRESS PERMISSION OF THE TOWNSHIP ENGINEER.
- THE CONTRACTOR IS NOTIFIED THAT HE MUST MAINTAIN TRAFFIC AND ACCESS TO THE RESIDENCES. HE IS ALSO NOTIFIED TO ASSURE ACCESS FOR GARBAGE COLLECTION.
- PAYMENT FOR PIPES (IF REQUIRED) SHALL BE ON THE BASIS OF HORIZONTAL LINEAR FEET. THE UNIT PRICE PER LINEAR FEET SHALL INCLUDE THE COST FOR CONSTRUCTION LAYOUT, EXCAVATION AND BACKFILLING WITH SPECIFIED MATERIAL.
- ANY EXISTING FENCES THAT INTERFERE WITH CONSTRUCTION SHALL BE REMOVED AND SHALL BE RESET AT THE LOCATION ACCEPTABLE TO THE OWNER AND THE ENGINEER.
- THE CONTRACTOR IS RESPONSIBLE TO OBEY ALL THE SAFETY AND HEALTH REGULATIONS. THE OWNER ASSUMES NO RESPONSIBILITY FOR THE SAFETY OF THE WORK PERFORMED.
- THIS CONTRACT REQUIRES THE PAYMENT OF PREVAILING STATE WAGE RATES.

- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL HAVE ALL UNDERGROUND UTILITIES LOCATED AND PHYSICALLY MARKED OUT WITHIN THE LIMITS OF THE PROJECT. (CALL 1-800-272-1000). THE CONTRACTOR SHALL PROVIDE TEST HOLES IN AREAS OF POSSIBLE CONFLICT TO VERIFY THE DEPTH AND LOCATION OF THE UTILITY. PAYMENT SHALL BE MADE FOR THIS ITEM. NO SEPARATE PAYMENT SHALL BE MADE FOR DELAYS THAT MAY BE NECESSARY TO RELOCATE UTILITIES OF THE PROPOSED LOCATION OF DRAINAGE STRUCTURES.
- ALL LOCATIONS ON THESE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL INFORMATION AND REPORT ALL DISCREPANCIES AT THE TIME OF BID.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING WARNING SIGNS, BARRICADES, AND ANY AND ALL SAFETY MEASURES AS MAY BE REQUIRED BY MUNICIPAL AND COUNTY CODE, OSHA, STANDARD PRACTICE, AND/OR COMMON SENSE. FLASHING LIGHTS OR OTHER ILLUMINATION DEVICES SHALL BE EMPLOYED TO WARN MOTORISTS AND PEDESTRIANS AFTER DARK. ALL TRAFFIC CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF THE N.J.D.O.T. REGULATIONS AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" LATEST EDITION.
- WHENEVER THE DRAWINGS INDICATE TO MEET EXISTING CONDITIONS, THE CONTRACTOR SHALL PROVIDE FOR A SMOOTH AND CONTINUOUS TRANSITION FROM PROPOSED TO EXISTING GRADES.
- THE CONTRACTOR SHALL EXPOSE OR RELOCATE ANY OR ALL GAS SERVICES. WATER SERVICES, SANITARY SEWER LATERALS, ELECTRICAL COMMUNICATIONS DUCTS OR ANY OTHER TYPE OF UTILITY AND ARRANGE FOR THEIR RELOCATION IF REQUIRED. NO DOWNTIME, ADDITIONAL COMPENSATION OR CONTRACT EXTENSION WILL BE MADE TO THE INTERFERENCE OF ANY UTILITY MAIN OR SERVICE THAT INTERFERES WITH THE PROPOSED WORK.
- THE TOWNSHIP OF MAPLEWOOD RESERVES THE RIGHT TO INCREASE OR DECREASE QUANTITIES AND ADD OR DELETE ITEMS AS REQUIRED.
- NO MATERIAL OR EQUIPMENT IS TO BE STORED ON ANY STREET OR RIGHT-OF-WAY OVERNIGHT. ALL EXCAVATIONS SHALL BE BACKFILLED AT THE END OF EACH WORK DAY.
- TRAFFIC SIGNAGE AND STRIPING SHOWN ON THESE PLANS SHALL CONFORM TO NEW JERSEY DEPARTMENT OF TRANSPORTATION (NJDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2007, AS AMENDED, UNLESS INDICATED OTHERWISE AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) LATEST EDITION. A PRINT-GRADE COPIES OF TOWNSHIP SPECIFIC LOGOS AND GRAPHICS PERTAINING TO THE SIGNS IN THIS PROJECT WILL BE MADE AVAILABLE TO THE CONTRACTOR UPON REQUEST. ALL CUSTOM SIGNAGE WILL CONFORM TO COLOR AND LETTERING SCHEMES SPECIFIED BY MOST CURRENT MUTCD.
- ALL ROADWAYS ARE TO BE PASSABLE FOR EMERGENCY VEHICLE USE DURING CONSTRUCTION.
- SUBSTITUTIONS OF PROPERTY MATERIAL AND/OR PRODUCT SPECIFICATIONS THAT NOTE "OR EQUAL" MUST BE APPROVED BY THE DESIGN ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DEMONSTRATE TO THE SATISFACTION OF THE DESIGN ENGINEER THAT THE SUBSTITUTION IS EQUAL.
- SHOP DRAWING SUBMITTALS SHALL BE SUBMITTED TO THE ENGINEER A MINIMUM OF 12 DAYS IN ADVANCE OF CONTRACTOR NEED.
- THE CONTRACTOR SHALL PREPARE THE MILLED SURFACE WITH TACK COAT IN ACCORDANCE WITH THE SPECIFICATIONS PRIOR TO FINAL PAVING.
- MILLING OF ROADS SHALL BE TO THE EDGE OF THE ASPHALT PAVING. TO THE CURB LINE IF THE ROAD IS CURBED, TO THE EDGE OF PAVEMENT IF THE ROAD IS NOT CURBED, AND TO THE EDGE OF THE STONE GUTTER IF ONE EXISTS.
- MATERIALS INSTALLED WITHIN THE RIGHT OF WAY THAT BELONG TO PROPERTY OWNERS, THAT ARE TO BE REMOVED SHALL BE OFFERED TO THE HOMEOWNER PRIOR TO DISPOSAL.
- STRIPING ON ALL STREETS SHALL BE DONE WITHIN 10 CALENDAR DAYS AFTER PAVING. SEE SPECIFICATIONS FOR PENALTIES.
- LOCATIONS FOR MANHOLE AND INLET REPAIRS ARE TO BE AS SHOWN ON THE PLANS UNLESS OTHERWISE INDICATED BY THE TOWNSHIP ENGINEER IN THE FIELD.
- CONTRACTOR TO ENSURE STRIPING SUBCONTRACTOR INSTALLS "CONTINENTAL" STYLE CROSSWALK BARS PARALLEL TO DIRECTION OF TRAVEL.
- IN ACCORDANCE WITH TITLE 39 OF N.J.S.A. HANDICAP CURB RAMPS ARE REQUIRED AT ALL CROSSWALKS WHEREVER A SIDEWALK EXISTS OR IS PROPOSED. ALL CURB RAMPS MUST CONFORM TO THE ADA REQUIREMENTS AND THE DETAILS PROVIDED HEREIN. CURB RAMPS SHALL BE CONSTRUCTED AT ALL LOCATIONS AS SHOWN IN THE CONSTRUCTION PLANS AND/OR AS DIRECTED IN THE FIELD BY THE ENGINEER FOR CONFORMANCE WITH APPLICABLE REGULATIONS. IN THE EVENT OF A CONFLICT BETWEEN THE PLANS AND ADA REGULATIONS, THE REGULATIONS SHALL APPLY.
- THIS SET OF DRAWINGS AND ALL INFORMATION CONTAINED HEREIN IS AUTHORIZED FOR USE ONLY BY THE PARTY FOR WHOM THE WORK WAS CONTRACTED OR TO WHOM IT IS CERTIFIED.
- THIS DRAWING MAY NOT BE COPIED, REUSED, DISCLOSED, DISTRIBUTED OR RELIED UPON FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF THE TOWNSHIP OF MAPLEWOOD.
- THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THESE PLANS AS CONTAINED HEREIN.
- WHERE NEW WORK MEETS EXISTING PAVEMENT, EXISTING PAVEMENT SHALL BE SAW CUT. COST SHALL BE INCLUDED IN CLEARING SITE. THERE SHALL BE NO SEPARATE PAYMENT FOR SAW CUTTING.
- THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL UTILITIES. IN THE EVENT OF A DISCREPANCY BETWEEN THE PLANS AND FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING.
- ALL REGRADED AREAS AT THE SITE WHICH ARE NOT DESIGNATED AS PAVED OR GRAVEL AREAS SHALL BE TOPSOILED AND SEEDED AND SHALL BE STABILIZED IN ACCORDANCE WITH STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY AND THE CONTRACT SPECIFICATIONS.
- THE CONTRACTOR'S LICENSED LAND SURVEYOR SHALL PROVIDE THE CONSTRUCTION STAKEOUT FOR THE PROJECT.
- WHEN DISTURBING, REMOVING, AND/OR DISPOSING OF ASBESTOS CEMENT PIPE, THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS INCLUDING BUT NOT LIMITED TO: CURRENT USEPA REGULATIONS (40 CFR 61 SUBPART M); OSHA REGULATIONS (29 CFR 1926.58); THE CURRENT NEW JERSEY ASBESTOS HAZARD ABATEMENT SUBCODE (N.J.A.C. 5:23-8); THE CURRENT NJDEP REGULATIONS (N.J.A.C. 7:26-1.1 ET. SEQ.); AND NOTIFICATION REGULATIONS (N.J.A.C. 5:23-8.6, 40 CFR 61 SUBPART M, AND N.J.A.C. 7:26-2.12).
- THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STATE OF NEW JERSEY WORKER HEALTH AND SAFETY ACT (N.J.A.C. 12:110 ET. SEQ.) AS AMENDED AND THE UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) (29 CFR 1910), AS AMENDED WITH REGARDS TO WORKER AND JOBSITE SAFETY.
- NO EXTRA COMPENSATION SHALL BE MADE FOR DE-WATERING.
- THE CONTRACTOR SHALL PROVIDE CONSTRUCTION NOTICE SIGNS STATING THE APPROXIMATE START DATE OF THE PROJECT. THE SIGNS SHALL BE PLACED AT EACH END OF EACH STREET 2 WEEKS BEFORE THE APPROXIMATE START DATE OF THE PROJECT. ALL COSTS FOR THESE SIGNS SHALL BE INCLUDED IN THE VARIOUS BID ITEMS OF THE PROJECT.
- THE CONTRACTOR SHALL COMPLY WITH ALL MINIMUM PIPE COVER REQUIREMENTS AS SPECIFIED BY THE MANUFACTURER.
- THE CONTRACTOR SHALL CALL "NEW JERSEY ONE CALL" (1-800-272-1000) FOR ALL LOCATIONS, IDENTIFY ANY POTENTIAL CONFLICTS, PERFORM HAND TEST PIT EXCAVATIONS, LOCATE AND MEASURE UTILITIES AND ADVISE THE MAPLEWOOD ENGINEERING DEPARTMENT. THE MAPLEWOOD ENGINEERING DEPARTMENT RESERVES THE RIGHT TO REVISE THE DESIGN AS NECESSARY TO AVOID CONFLICTS AND MAY ADD OR REDUCE THE QUANTITIES AS REQUIRED.
- NO SEPARATE PAYMENT WILL BE MADE FOR THE RESTORATION OF UTILITY SERVICES THAT MAY BE AFFECTED BY THE WORK OF THIS PROJECT. THE CONTRACTOR SHALL RESTORE ALL CONNECTIONS AT HIS OWN COST.

NO.	DATE	REVISION	DRAWN	CHK'D	REL'D

TOWNSHIP OF MAPLEWOOD
 COUNTY OF ESSEX, NEW JERSEY
 574 VALLEY STREET, MAPLEWOOD, NJ 07040
 Ph: 973.762.8120 F: 973.762.2894



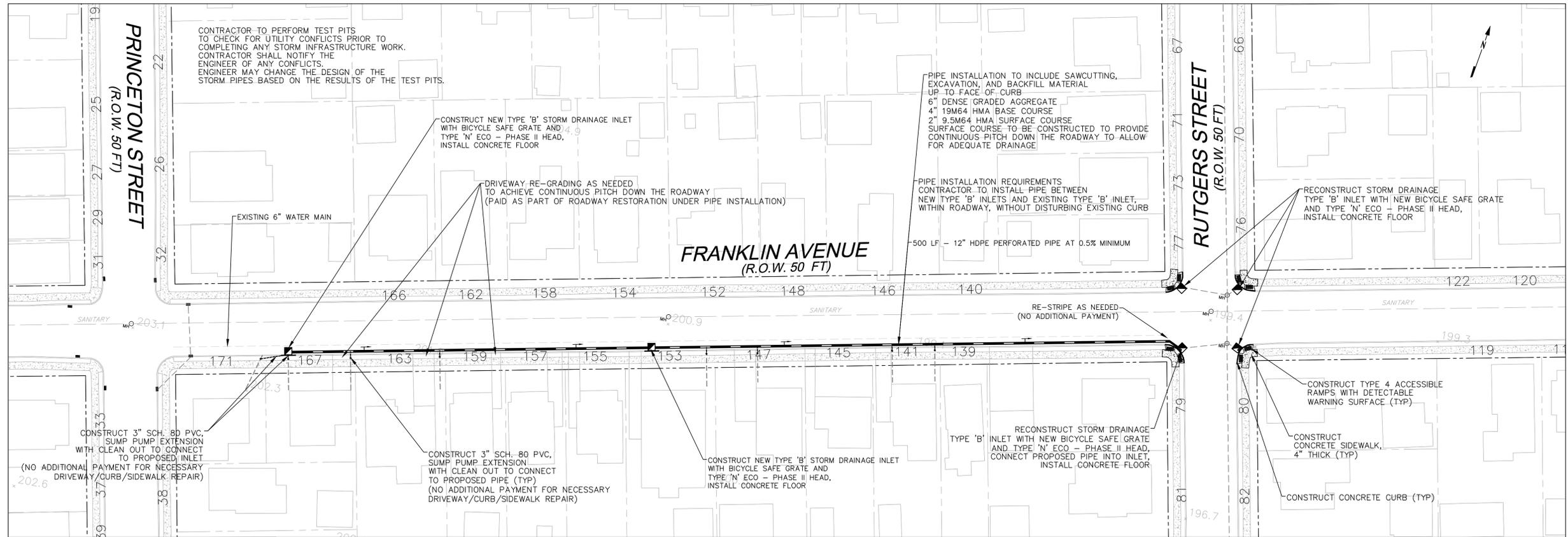
Paul J. Kittner, Jr.
PAUL J. KITTNER, JR.
 NEW JERSEY PROFESSIONAL ENGINEER
 LIC. NO. 246E04250500

ENGINEERING DEPARTMENT
 TOWNSHIP OF MAPLEWOOD
 ESSEX COUNTY
 NEW JERSEY

STORM DRAINAGE IMPROVEMENTS
 FY 2016 - VARIOUS LOCATIONS
 QUANTITIES AND GENERAL NOTES

Job No. 2016-002
 Scale: NTS
 Drawn ADG / Designed ADG/PJK
 Checked ADG/PJK / Released PJK
 Date 8/5/16 / Drawer # TBD
 SHEET No. 3
 OF 11

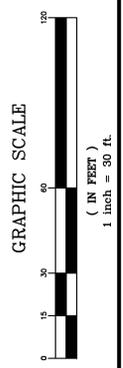




BASE BID - FRANKLIN AVENUE - PLAN VIEW

NO.	DATE	REVISION	DRAWN	CHK'D	REV'D

TOWNSHIP of MAPLEWOOD
 COUNTY OF ESSEX, NEW JERSEY
 574 VALLEY STREET, MAPLEWOOD NJ 07040
 Ph. 973.762.8120 F. 973.762.2894



Paul J. Kittner Jr.
PAUL J. KITTNER JR.
 NEW JERSEY PROFESSIONAL ENGINEER
 LIC. NO. 246E04250500

ENGINEERING DEPARTMENT
TOWNSHIP OF MAPLEWOOD
ESSEX COUNTY
NEW JERSEY

STORM DRAINAGE IMPROVEMENTS
FY 2016 - VARIOUS LOCATIONS
CONSTRUCTION PLAN - BASE BID

NOTE:

GENERAL NOTE:
 1. DIMENSIONS FOR STORM SEWER AND INLET RECONSTRUCTION TO BE DETERMINED IN THE FIELD BY ENGINEER.
 2. DATUM FOR ALL REFERENCED SURVEY/GRADING SHOTS ARE BASED ON AN ASSUME DATUM OF 100.00 FEET ELEVATION UNLESS OTHERWISE NOTED.
 3. PHYSICAL FEATURE INFORMATION SUPPLEMENTED BY FIELD INVESTIGATIONS.

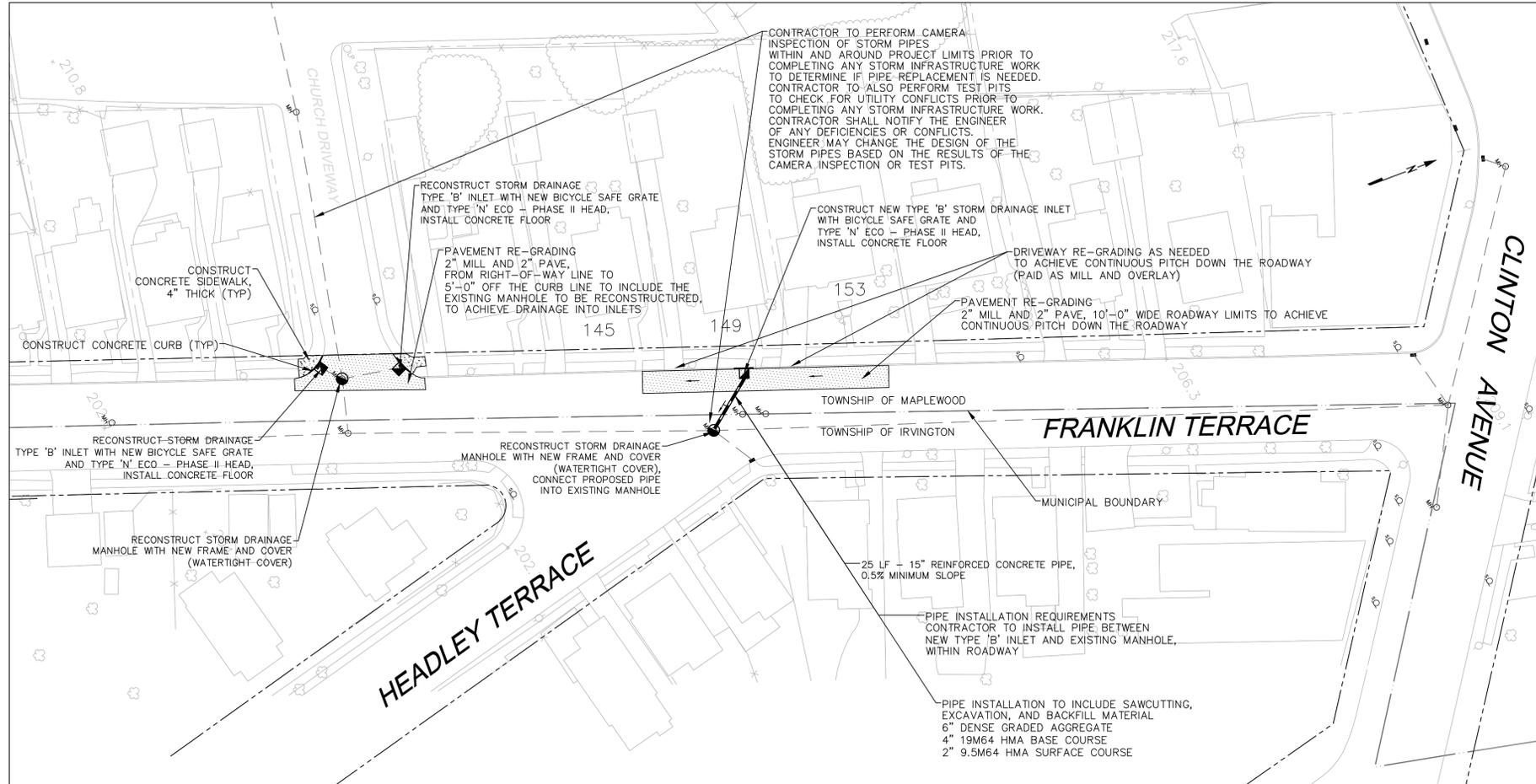
REFERENCES:
 1. PHYSICAL AND PHYSICAL FEATURE INFORMATION TAKEN FROM TOPOGRAPHIC MAPPING PREPARED FOR THE TOWNSHIP OF MAPLEWOOD, NEW JERSEY IN 2007.
 2. PROPERTY LINES AND RIGHT OF WAY TAKEN FROM TOWNSHIP TAX MAPS.
 3. PHYSICAL FEATURE INFORMATION SUPPLEMENTED BY FIELD INVESTIGATIONS.

Job No. 2016-002	Scale: 1" = 30'
Drawn ADG	Designed ADG/PJK
Checked ADG/PJK	Released PJK
Date 8/5/16	Drawer # TBD
SHEET No. 4	
OF 11	





Know what's below.
Call before you dig.



BID ALTERNATE A - FRANKLIN TERRACE - PLAN VIEW

NOTE:

- GENERAL NOTE:
 1. CONSTRUCTION AND PHYSICAL FEATURE INFORMATION TAKEN FROM TOPOGRAPHIC MAPPING FOR THE TOWNSHIP OF MAPLEWOOD, NEW JERSEY IN 2007.
 2. PROPERTY LINES AND RIGHT OF WAY TAKEN FROM TOWNSHIP TAX MAPS.
 3. PHYSICAL FEATURE INFORMATION SUPPLEMENTED BY FIELD INVESTIGATIONS.

GENERAL NOTE:
 1. ELEVATIONS FOR STORM SEWER AND INLET RECONSTRUCTION RECONSTRUCTION TO BE DETERMINED IN THE FIELD BY ENGINEER.
 2. DATUM FOR ALL REFERENCED SURVEY/GRADING SHOTS ARE BASED ON AN ASSUME DATUM OF 100.00 FEET. THE GRADE ELEVATIONS FURNISHED ARE TIED INTO THE TOWNSHIP ESTABLISHED NOTES ON VARIOUS ELEVATIONS.

GRAPHIC SCALE



NO.	DATE	REVISION	DRAWN	CHK'D	REV'D

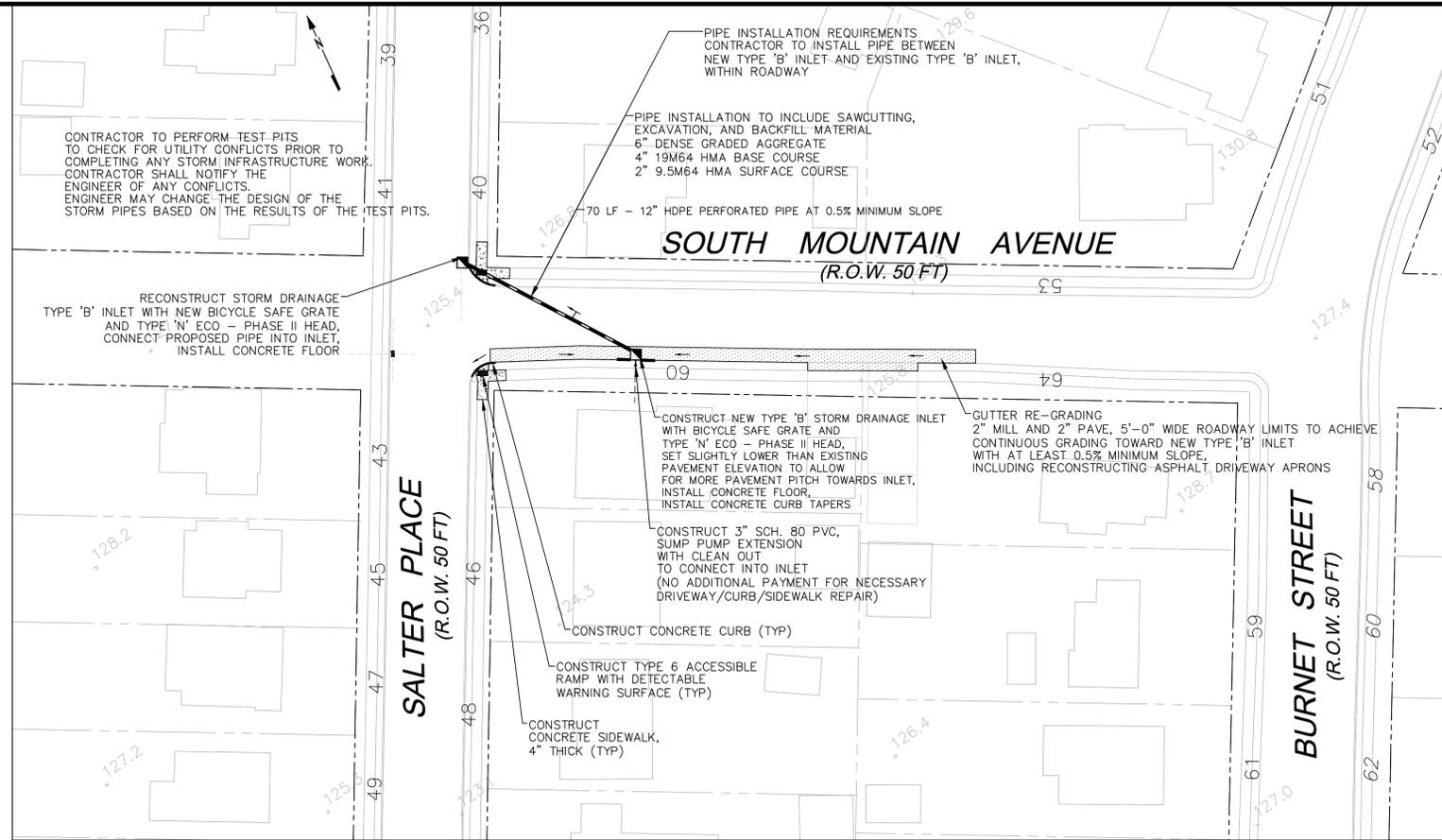
STORM DRAINAGE IMPROVEMENTS
 FY 2016 - VARIOUS LOCATIONS
 CONSTRUCTION PLAN
 BID ALTERNATES

Job No. 2016-002	
Scale: 1" = 30'	
Drawn ADG	Designed ADG/PJK
Checked ADG/PJK	Released PJK
Date 8/5/16	Drawer # TBD
SHEET No. 5	
OF 11	

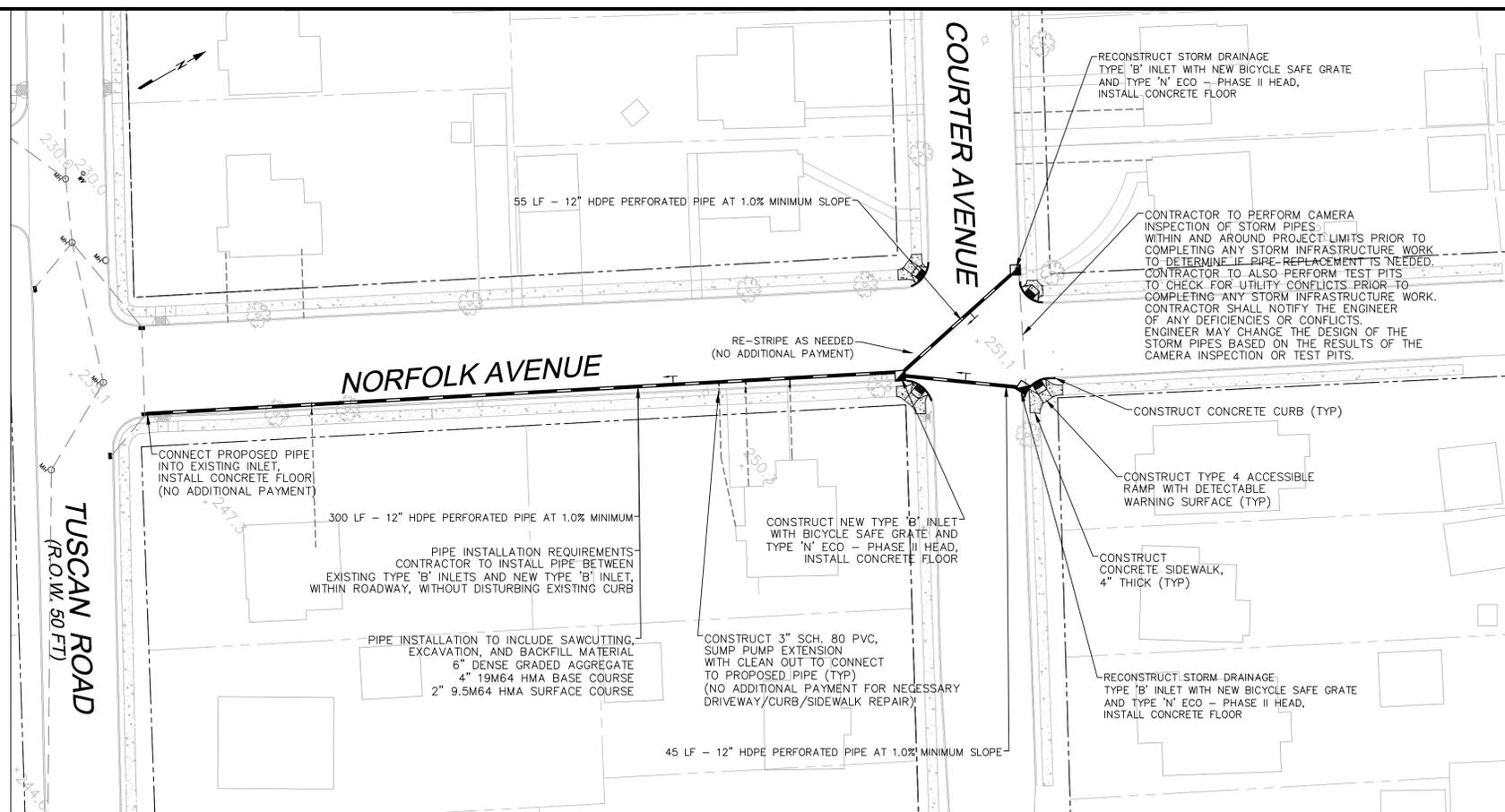
ENGINEERING DEPARTMENT
 TOWNSHIP OF MAPLEWOOD
 ESSEX COUNTY
 NEW JERSEY

PAUL J. KITTNER JR.
 NEW JERSEY PROFESSIONAL ENGINEER
 LIC. NO. 246E04250500

TOWNSHIP of MAPLEWOOD
 COUNTY OF ESSEX, NEW JERSEY
 574 VALLEY STREET, MAPLEWOOD NJ 07040
 Ph. 973.762.8120 F. 973.762.2894

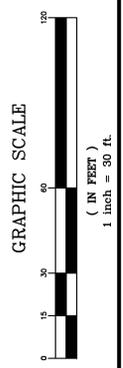


BID ALTERNATE B - SOUTH MOUNTAIN AVENUE - PLAN VIEW



BID ALTERNATE C - NORFOLK AVENUE - PLAN VIEW

NO.	DATE	REVISION	DRAWN	CHK'D	REV'D



TOWNSHIP of MAPLEWOOD
 COUNTY OF ESSEX, NEW JERSEY
 574 VALLEY STREET, MAPLEWOOD NJ 07040
 Ph. 973.762.8120 F. 973.762.2894

ENGINEERING DEPARTMENT
 TOWNSHIP OF MAPLEWOOD
 ESSEX COUNTY
 NEW JERSEY

PAUL J. KITTNER JR.
 NEW JERSEY PROFESSIONAL ENGINEER
 LIC. NO. 246E04250500

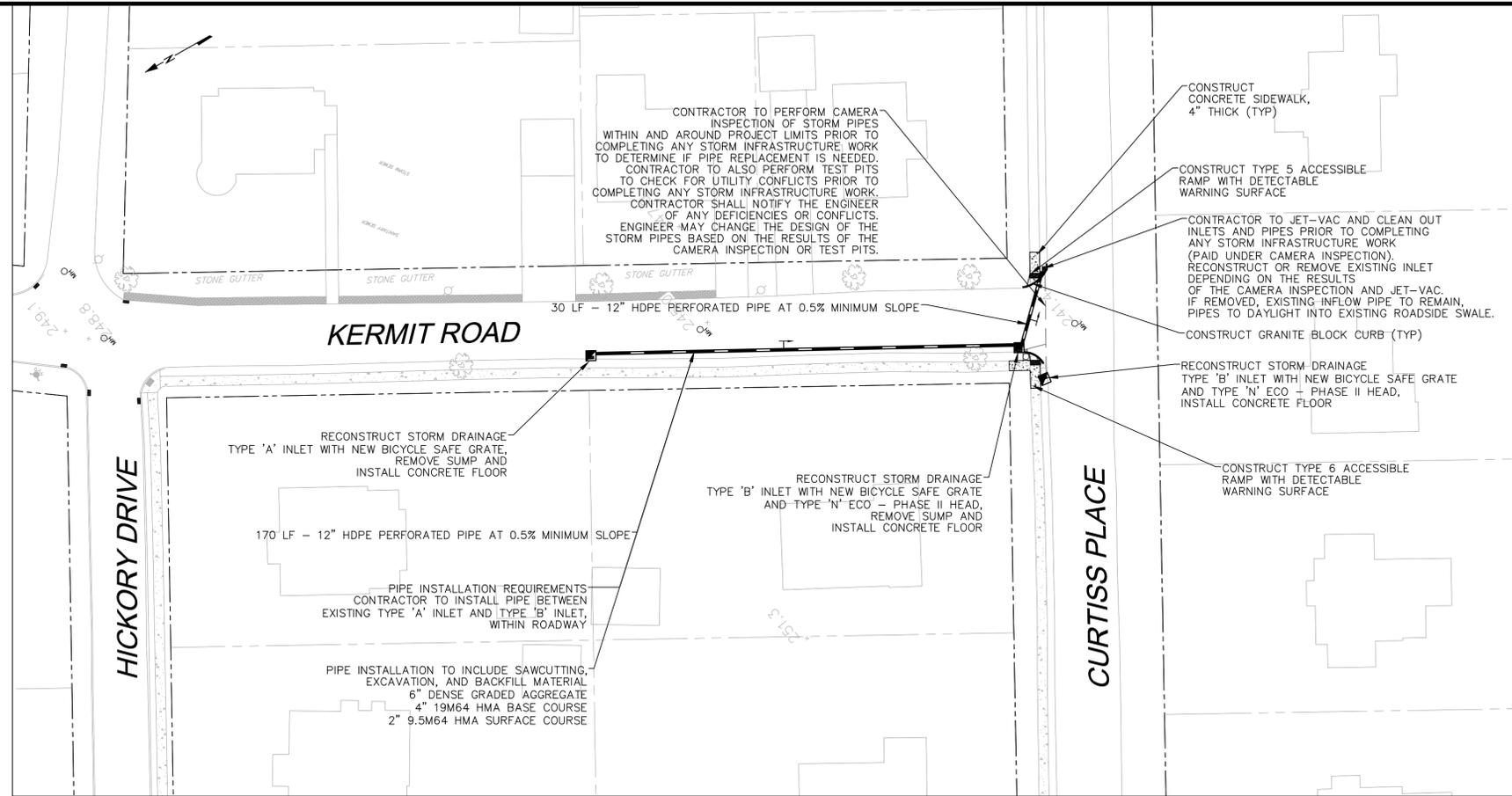
ENGINEERING DEPARTMENT
 TOWNSHIP OF MAPLEWOOD
 ESSEX COUNTY
 NEW JERSEY

STORM DRAINAGE IMPROVEMENTS
 FY 2016 - VARIOUS LOCATIONS
 CONSTRUCTION PLAN
 BID ALTERNATES

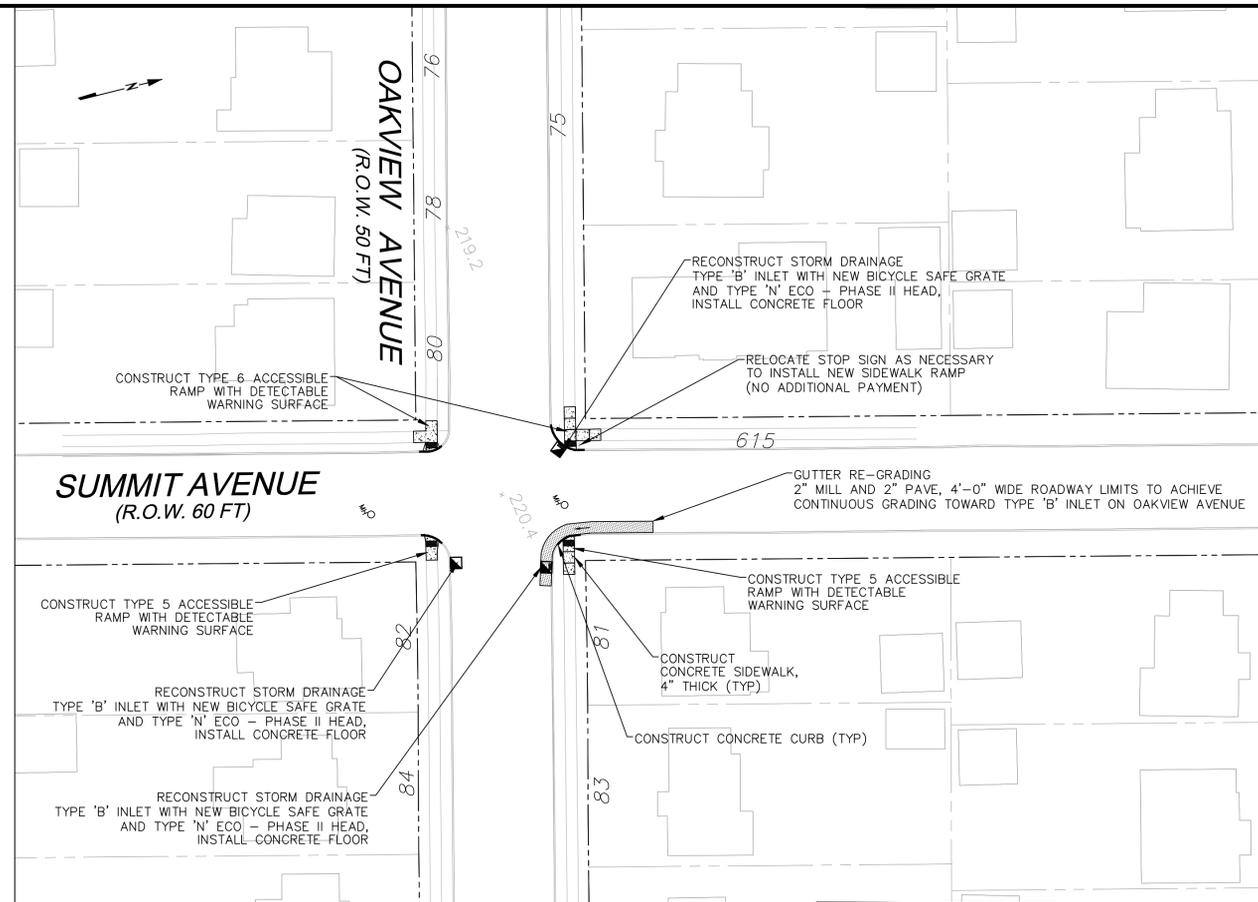
NOTE:
 1. GENERAL NOTE: DIMENSIONS FOR STORM SEWER AND INLET RECONSTRUCTION RECONSTRUCTION TO BE DETERMINED IN THE FIELD BY ENGINEER.
 2. DATUM FOR ALL REFERENCED SURVEY/GRADING SHOTS ARE BASED ON AN ASSUME DATUM OF 100.00 FEET ELEVATION. THE GRADE ELEVATIONS FURNISHED ARE TIED INTO THE TOWNSHIP ESTABLISHED NOTES ON VARIOUS ELEVATIONS.

Job No.	2016-002
Scale:	1" = 30'
Drawn	ADG
Designed	ADG/PJK
Checked	ADG/PJK
Released	PJK
Date	8/5/16
Drawer #	TBD
SHEET No.	6
OF 11	



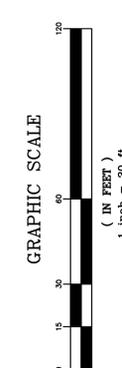


BID ALTERNATE D - KERMIT ROAD - PLAN VIEW



BID ALTERNATE E - SUMMIT AVENUE - PLAN VIEW

NO.	DATE	REVISION	DRAWN	CHK'D	REV'D



TOWNSHIP of MAPLEWOOD
 COUNTY OF ESSEX, NEW JERSEY
 574 VALLEY STREET, MAPLEWOOD NJ 07040
 Ph. 973.762.8120 F. 973.762.2894

PAUL J. KITTNER JR.
 NEW JERSEY PROFESSIONAL ENGINEER
 LIC. NO. 246E04250500

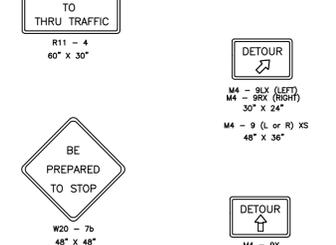
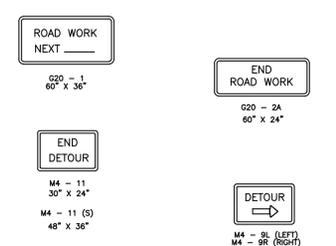
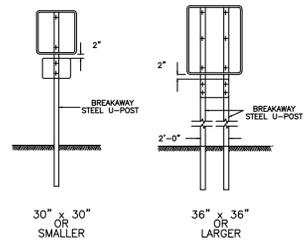
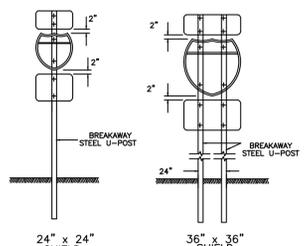
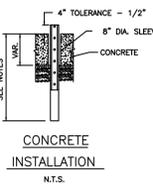
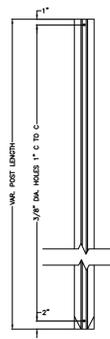
ENGINEERING DEPARTMENT
 TOWNSHIP OF MAPLEWOOD
 ESSEX COUNTY
 NEW JERSEY

STORM DRAINAGE IMPROVEMENTS
 FY 2016 - VARIOUS LOCATIONS
 CONSTRUCTION PLAN
 BID ALTERNATES

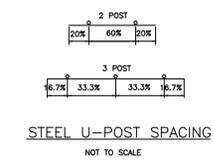
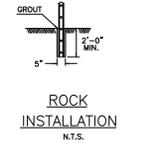
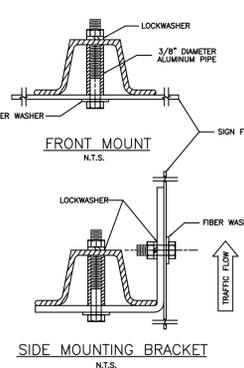
NOTE:
 GENERAL NOTE:
 1. CONDITIONS FOR STORM SEWER AND INLET RECONSTRUCTION RECONSTRUCTION TO BE DETERMINED IN THE FIELD BY ENGINEER.
 2. DATUM FOR ALL REFERENCED SURVEY/GRADING SHOTS ARE BASED ON AN ASSUME DATUM OF 100 FEET ELEVATION ABOVE THE GRADE ELEVATIONS FURNISHED ARE TIED INTO THE TOWNSHIP ESTABLISHED NOTES ON VARIOUS ELEVATIONS.
 REFERENCE:
 1. TOPOGRAPHIC AND PHYSICAL FEATURE INFORMATION TAKEN FROM TOPOGRAPHIC MAPPING PREPARED FOR THE TOWNSHIP OF MAPLEWOOD, NEW JERSEY IN 2007.
 2. PROPERTY LINES AND RIGHT OF WAY TAKEN FROM TOWNSHIP TAX MAPS.
 3. PHYSICAL FEATURE INFORMATION SUPPLEMENTED BY FIELD INVESTIGATIONS.

Job No.	2016-002
Scale:	1" = 30'
Drawn	ADG
Designed	ADG/PJK
Checked	ADG/PJK
Released	PJK
Date	8/5/16
Drawer #	TBD
SHEET No.	7
OF 11	





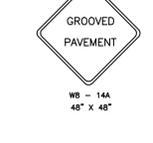
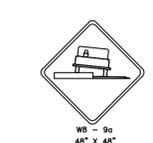
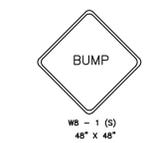
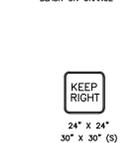
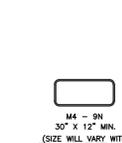
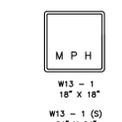
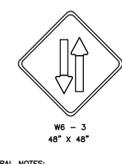
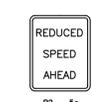
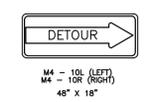
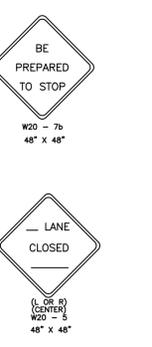
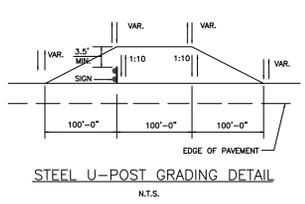
NOTE: END TAPER OPTIONAL



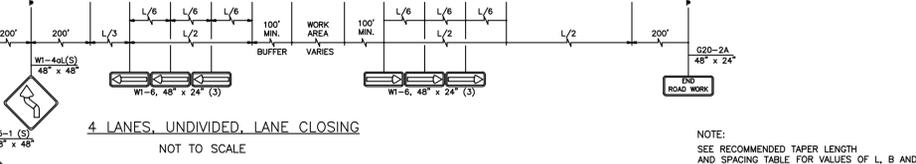
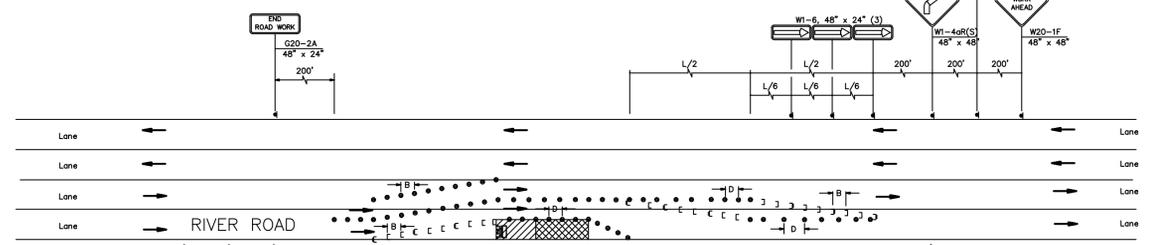
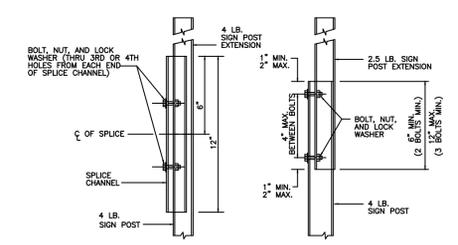
SIGN PANEL SIZE	LEGEND CODE	SIGN PANEL SIZE	LEGEND CODE
18 X 18	A	36 X 36	C
18 X 24	A	36 X 48	C
24 X 24	A	48 X 36	C
24 X 30	A	48 X 24	C
24 X 36	A	48 X 36	C
30 X 24	A	48 X 48	D
30 X 30	A	48 X 64 X 64	C
36 X 12	C	60 X 36	D
36 X 36 X 36	C	48 X 60	D
30 X 36	B	60 X 30	D

LEGEND CODE	NO. POSTS	WEIGHT LBS./FT.	MATERIAL
A	1	2.5	1 PIECE OR 2 PIECE STEEL
B	1	4.0	2 PIECE STEEL
C	2	2.5	2 PIECE STEEL
D	2	4.0	2 PIECE STEEL

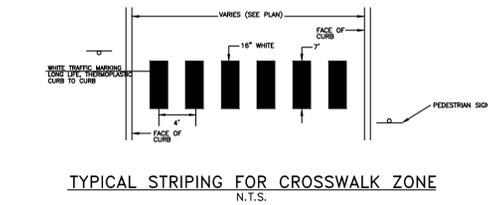
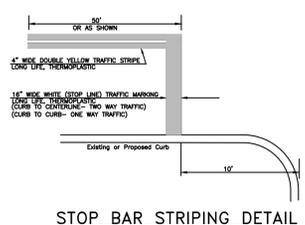
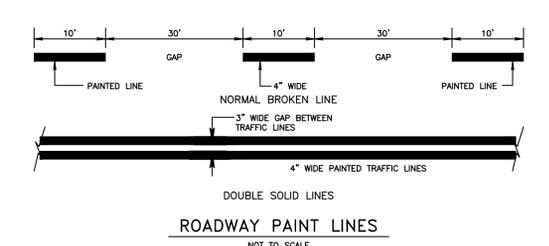
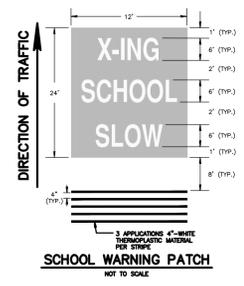
POST SELECTION TABLE
BREAKAWAY SIGN SUPPORT



- GENERAL NOTES:
- ALL POSTS SHALL BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS."
 - TWO PIECE STEEL U-POSTS SHALL BE EMBEDDED 3'-8" MINIMUM ON PIECE STEEL U-POSTS SHALL BE EMBEDDED ONE METER MAXIMUM.
 - ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH CURRENT ASTM A123.
 - POSTS MAY BE STEEL OR 2 PIECE STEEL U-POST IN CONFORMANCE WITH THE NOTES BELOW.
 - SIGN PANEL SIZES SHALL DETERMINE POST TYPE AND NUMBER AS SHOWN ON THIS DETAIL.
 - BOLTS SHALL NOT PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT BUT SHALL ENGAGE ALL THREADS IN THE NUT.
 - THE MINIMUM VERTICAL CLEARANCE REQUIREMENTS FOR SIGNS ARE: EDGE OF PAVEMENT TO BOTTOM OF SIGN SHALL BE IN ACCORDANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. GROUNDLINE TO BOTTOM OF SIGN SHALL BE 7 FEET MINIMUM. FOR SINGLE POST INSTALLATIONS, THE MINIMUM DISTANCE FROM GROUNDLINE TO THE TOP OF SIGN MUST BE 9 FEET.
 - PERMANENT SIGN SUPPORTS SHALL NOT BE INSTALLED ON SLOPES GREATER THAN 10:1, UNLESS BEHIND A TRAFFIC BARRIER, AND THE SLOPE SHALL EXTEND A MINIMUM OF 3'-0" BEYOND THE OUTSIDE EDGE OF SIGN (SEE GRADING DETAIL FOR SLOPE TREATMENT).
 - EXTRUDED ALUMINUM SIGN PANELS ARE NOT PERMITTED FOR USE WITH U-POST SIGN SUPPORTS.
 - U-POST SIGN SUPPORTS SHALL NOT BE PLACED IN FRONT OF GUIDE RAIL AND THE POSTS MUST NOT STRADDLE GUIDE RAIL.
 - TO EXTEND THE HEIGHT OF A SIGN POST, A MAXIMUM OF ONE SPLICE MAY BE MADE AND MUST BE A MINIMUM OF 9 FEET FROM THE GROUNDLINE TO CENTERLINE OF SPLICE.



NOTE: SEE RECOMMENDED TAPER LENGTH AND SPACING TABLE FOR VALUES OF L, B AND D.



NO.	DATE	REVISION	CHK'D	RELD

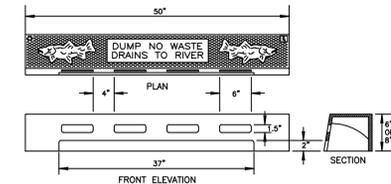
TOWNSHIP OF MAPLEWOOD
COUNTY OF ESSEX, NEW JERSEY
574 VALLEY STREET, MAPLEWOOD NJ 07040
Ph. 973.762.8120 F. 973.762.2894

PAUL J. KITTNER JR.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. NO. 24GE04250500

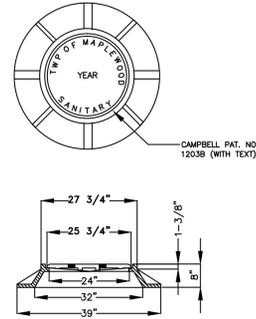
ENGINEERING DEPARTMENT
TOWNSHIP OF MAPLEWOOD
ESSEX COUNTY
NEW JERSEY

STORM DRAINAGE IMPROVEMENTS
FY 2016 - VARIOUS LOCATIONS
TRAFFIC CONTROL DETAILS

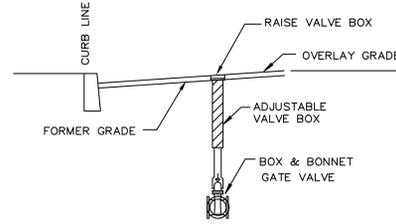
Job No.	2016-002
Scale:	NTS
Drawn	ADD
Designed	ADG/PJK
Checked	ADG/PJK
Released	PJK
Date	8/5/16
Drawer #	TBD
SHEET No.	8
OF 11	



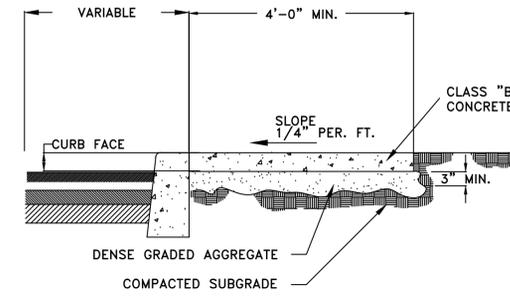
TYPE 'N-ECO' - PHASE II CURB PIECE
NOT TO SCALE



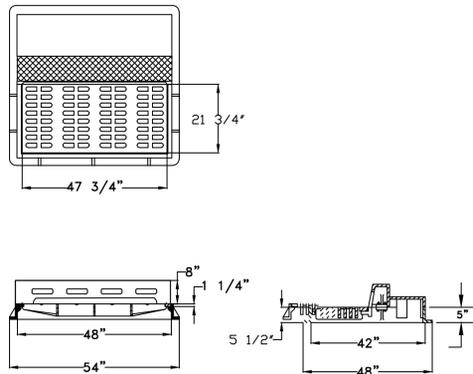
SANITARY MANHOLE FRAME AND REPLACEMENT
NOT TO SCALE



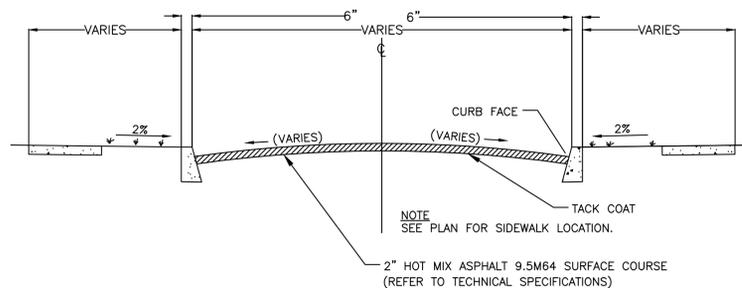
RESET VALVE DETAIL
NOT TO SCALE



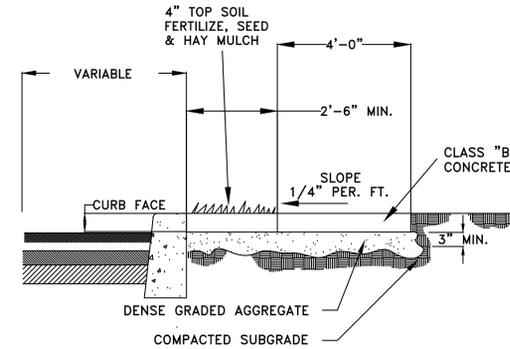
CONCRETE SIDEWALK WITH NO GRASS STRIP



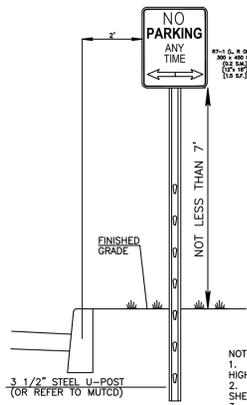
TYPE 'B' INLET CASTING WITH TYPE 'N' CURB PIECE
NOT TO SCALE



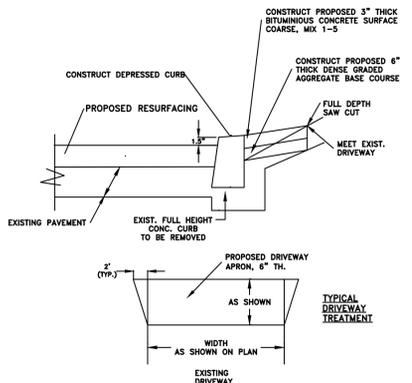
TYPICAL MILLING/OVERLAY ROADWAY SECTION
NOT TO SCALE



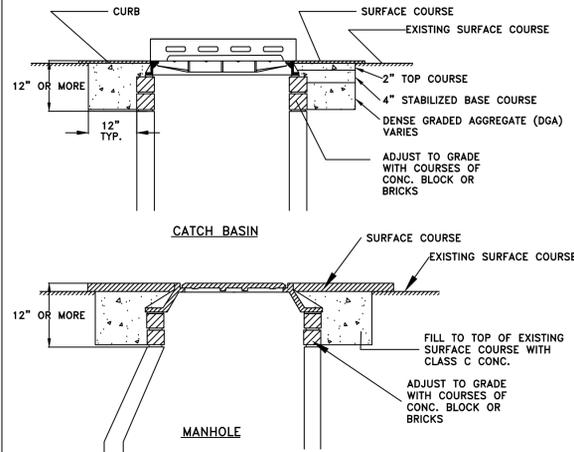
CONCRETE SIDEWALK WITH GRASS STRIP
NOT TO SCALE



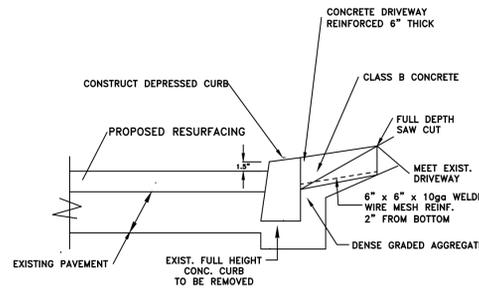
TYPICAL SIGN POST
NOT TO SCALE



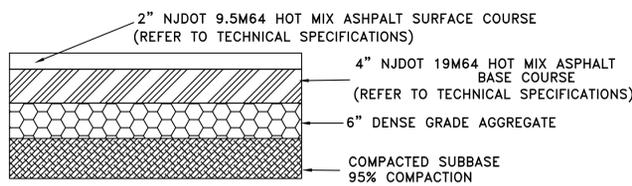
RECONSTRUCT 3" BITUMINOUS CONCRETE DRIVEWAY/ASPHALT PATHWAY
NOT TO SCALE



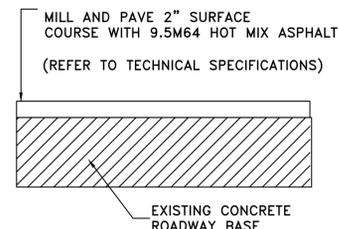
RECONSTRUCT TYPE 'B' CATCH BASIN OR MANHOLE DETAIL
NOT TO SCALE



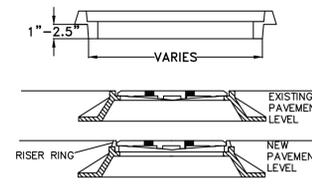
RECONSTRUCT CONCRETE DRIVEWAY, REINFORCED, 6" THICK
NOT TO SCALE



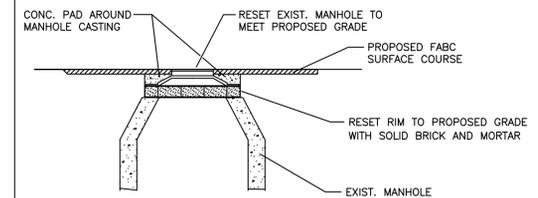
FULL DEPTH PAVEMENT RECONSTRUCTION FOR STABILIZED BASE COURSE
NOT TO SCALE



FULL DEPTH PAVEMENT RECONSTRUCTION FOR CONCRETE ROADWAY BASE
NOT TO SCALE



MANHOLE RISER RINGS
NOT TO SCALE



DETAIL - RESET EXIST. MANHOLE
NOT TO SCALE

NO.	DATE	REVISION	DRAWN	CHK'D	REL'D

TOWNSHIP of MAPLEWOOD
COUNTY OF ESSEX, NEW JERSEY
574 VALLEY STREET, MAPLEWOOD NJ 07040
Ph. 973.762.8120 F. 973.762.2894



Paul J. Kittner Jr.
PAUL J. KITTNER JR.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. NO. 246E04250500

ENGINEERING DEPARTMENT
TOWNSHIP OF MAPLEWOOD
ESSEX COUNTY
NEW JERSEY

STORM DRAINAGE IMPROVEMENTS
FY 2016 - VARIOUS LOCATIONS
CONSTRUCTION DETAILS

Job No. 2016-002

Scale: NTS

Drawn ADG

Designed ADG/PJK

Checked ADG/PJK

Released PJK

Date 8/5/16

Drawer # TBD

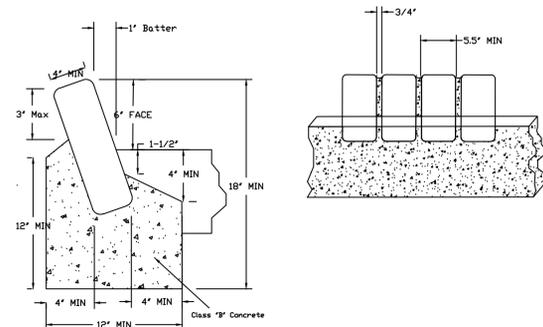
SHEET No.

9

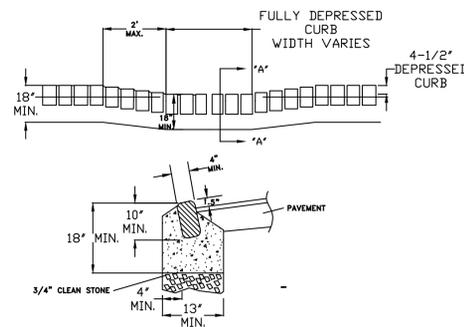
OF 11



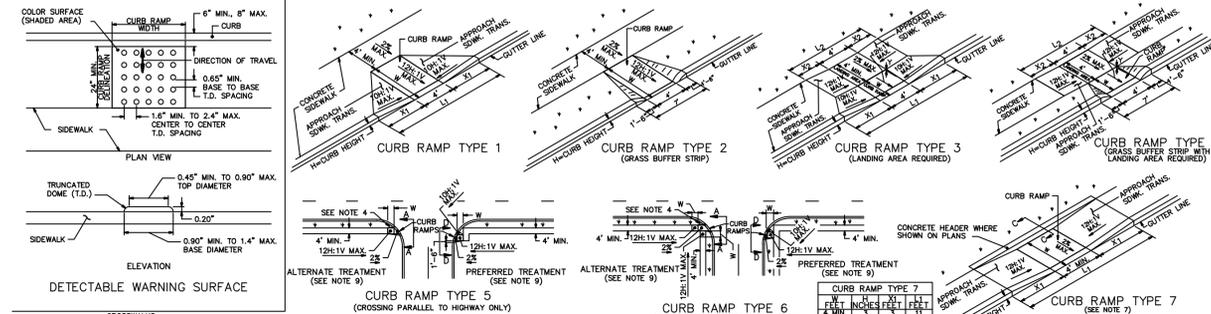
Know what's below.
Call before you dig.



BELGIUM BLOCK CURB DETAIL



GRANITE BLOCK DEPRESSED CURB AT DRIVEWAYS

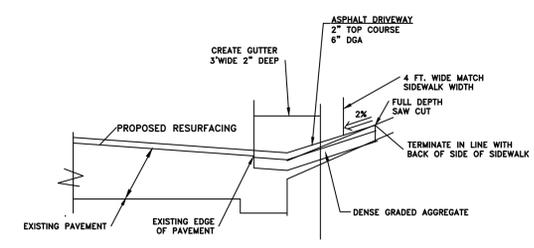


LOCATION OF CURB RAMP TYPES 1, 2, 3, 4 & 7 FOR CROSSING PARALLEL AND PERPENDICULAR TO HIGHWAY

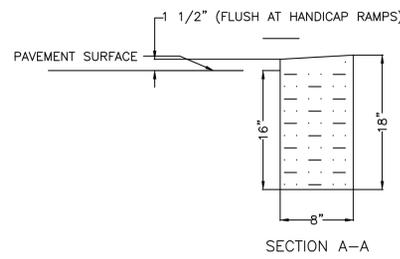
CURB RAMP TYPE	CROSSWALKS		ISLAND WALKWAY OPENING	
	W	L	W	L
1	2.5	4.0	2.5	4.0
2	4.0	4.0	4.0	4.0
3	4.0	4.0	4.0	4.0
4	4.0	4.0	4.0	4.0
5	4.0	4.0	4.0	4.0
6	4.0	4.0	4.0	4.0
7	4.0	4.0	4.0	4.0

GENERAL NOTES:
 1. LANDING AREA APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP SHALL BE KEPT CLEAR OF OBSTRUCTIONS.
 2. DIMENSIONS SHOWN IN TABLES ARE FOR RELATIVELY FLAT SIDEWALK AREAS. CARE SHOULD BE TAKEN WHEN DETERMINING CURB RAMP SIZE BASED ON CURB HEIGHT (H) WHERE ELEVATION OF CURB AND SIDEWALK VARY DRAMATICALLY IN AREA OF PROPOSED CURB RAMP.
 3. CURB (DROPPED CURB) CUTTERLINE TO BE FLUSH WITH ROADWAY PAVEMENT A MINIMUM OF 4 FEET AT ALL CURB RAMP.
 4. FOR CURB RAMP TYPES 5 AND 6, IF A GRASS BUFFER DOES NOT EXIST, SLOPE CURB TO EQUAL SLOPE OF ADJACENT CURB RAMP.
 5. SIDEWALK AND CURB RAMP WITHIN AREA ENCLOSED BY HEAVY LINES TO BE PAID FOR AS CONCRETE SIDEWALK OF THE APPROPRIATE ADJACENT THICKNESS.
 6. CURB AND HEADER WITHIN AREA ENCLOSED BY HEAVY LINES TO BE PAID FOR AS VERTICAL CURB OR SLOPING CURB OF THE APPROPRIATE ADJACENT SIZE AND KIND.
 7. WHERE THE DISTANCE FROM THE CUTTER LINE TO THE OUTSIDE EDGE OF SIDEWALK IS 6 FEET OR LESS, CURB RAMP TYPE 7 SHOULD BE USED, INSTEAD OF CURB RAMP TYPE 1 THROUGH 4.
 8. CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED, SEE PLANS.
 9. PREFERRED AND ALTERNATE TREATMENTS SHOULD NOT BE INTERMIXED WITHIN THE SAME INTERSECTION.
 10. DIMENSIONS SHOWN IN TABLES ARE FOR 3 INCH TO 9 INCH CURB HEIGHTS. WHERE THE CURB HEIGHTS ARE OTHER THAN WHAT IS PROVIDED IN THE TABLES, THE DIMENSIONS OF THE RAMPS WILL HAVE TO BE CALCULATED BASED ON CROSS SLOPES SHOWN.
 HMA = HOT MIX ASPHALT

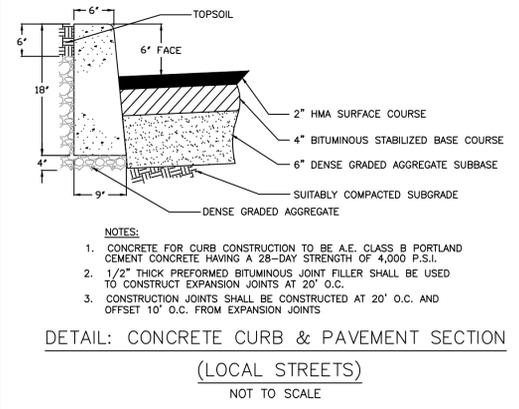
PUBLIC SIDEWALK CURB RAMP NOT TO SCALE



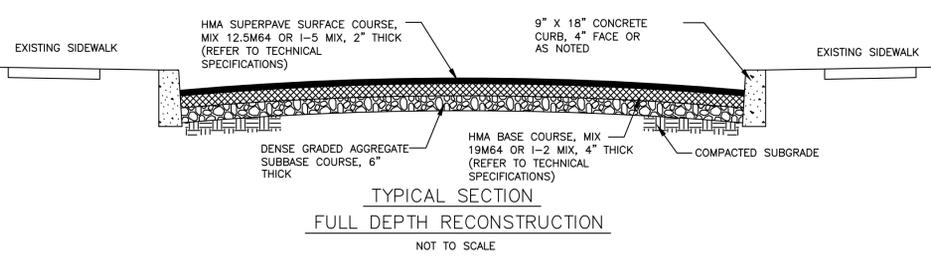
RECONSTRUCT ASPHALT W/O CURB, WITH GUTTER



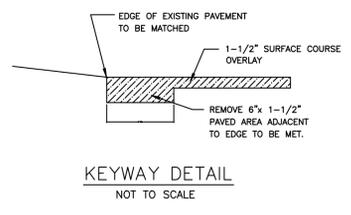
SECTION A-A



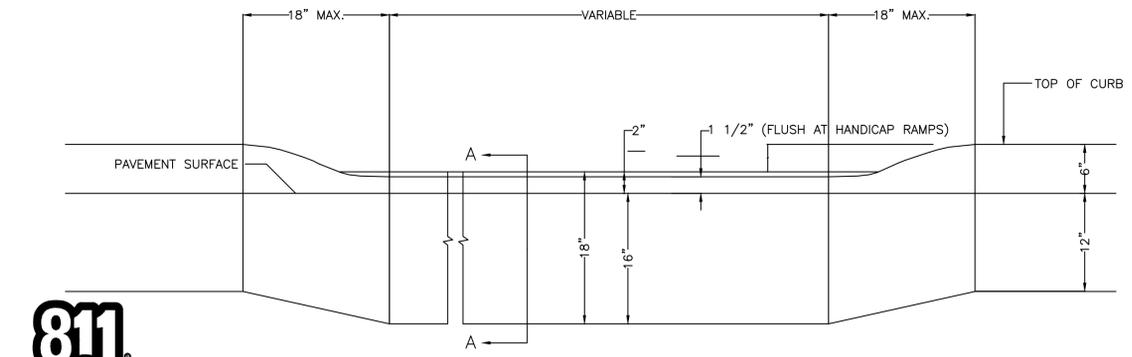
DETAIL: CONCRETE CURB & PAVEMENT SECTION (LOCAL STREETS) NOT TO SCALE



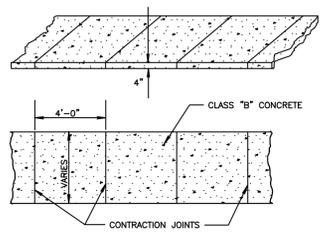
TYPICAL SECTION FULL DEPTH RECONSTRUCTION NOT TO SCALE



KEYWAY DETAIL NOT TO SCALE



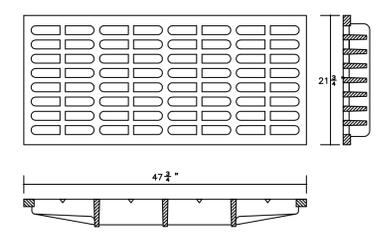
METHOD OF DEPRESSING CURB AT DRIVEWAYS NOT TO SCALE



TYPICAL DETAIL CONCRETE SIDEWALK NOT TO SCALE



PLASTIC COATED STEEL MANHOLE STEPS NOT TO SCALE



DETAIL BICYCLE GATE NOT TO SCALE



TOWNSHIP of MAPLEWOOD
 COUNTY OF ESSEX, NEW JERSEY
 574 VALLEY STREET, MAPLEWOOD NJ 07040
 Ph. 973.762.8120 F. 973.762.2894

PAUL J. KITTNER JR.
 NEW JERSEY PROFESSIONAL ENGINEER
 LIC. NO. 24GE04250500

ENGINEERING DEPARTMENT
 TOWNSHIP OF MAPLEWOOD
 ESSEX COUNTY
 NEW JERSEY

STORM DRAINAGE IMPROVEMENTS
 FY 2016 - VARIOUS LOCATIONS
 CONSTRUCTION DETAILS

Job No. 2016-002
 Scale: NTS
 Drawn ADG, Designed ADG/PJK
 Checked ADG/PJK, Released PJK
 Date 8/5/16, Drawer # TBD
 SHEET No. 10
 OF 11

