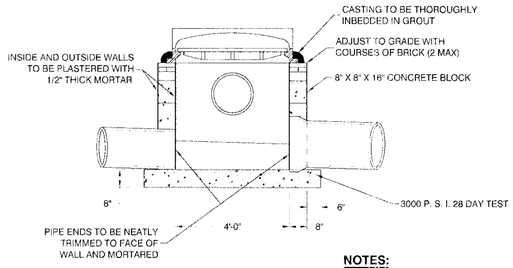


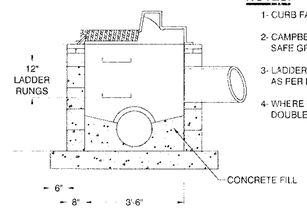
NOTES:

1- CURB FACE TO BE 6" UNLESS OTHERWISE INDICATED.

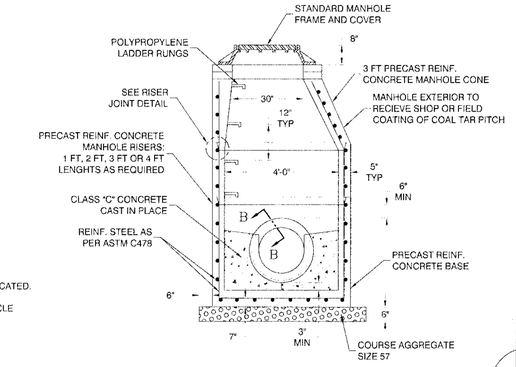
2- CAMPBELL CASTING PATTERN NO. 2818, "BICYCLE SAFE GRATE" OR APPROVED EQUIVALENT.

3- LADDER RUNGS SHALL BE POLYPROPYLENE AS PER DETAIL.

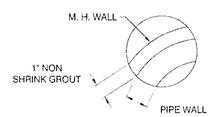
4- WHERE INLETS ARE GREATER THAN 8' DEEP, DOUBLE BLOCK WALLS ARE REQUIRED.



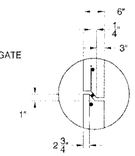
INLET TYPE "B"



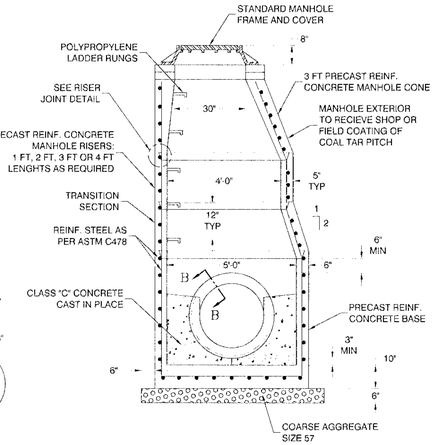
MANHOLE, 4' DIAMETER



SECTION B-B

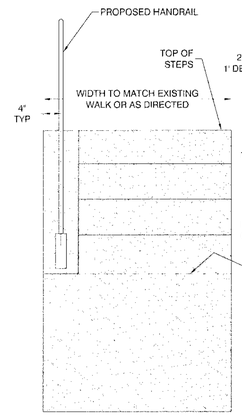


PRECAST MANHOLE RISER JOINT DETAIL

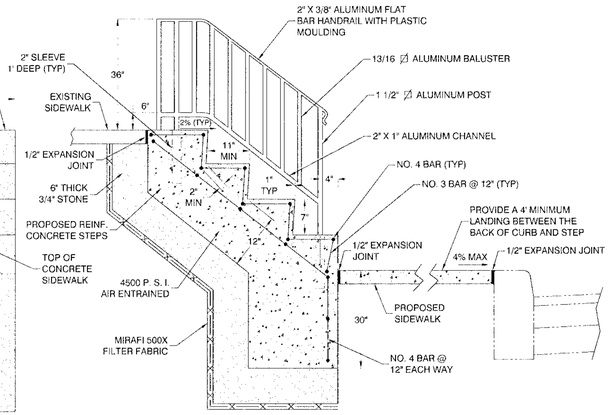


MANHOLE, 5' DIAMETER

STORM SEWER MANHOLES



FRONT VIEW



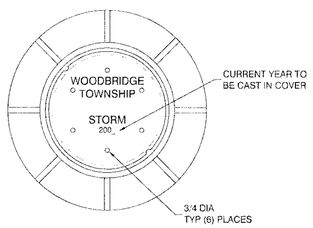
NUMBER OF STEPS AS INDICATED ON THE PLANS OR AS DIRECTED

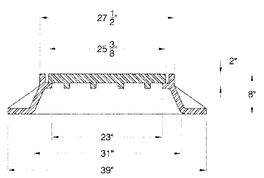
PROFILE

NOTE:

SEE PROFILE FOR REINFORCED STEEL DETAIL

REINFORCED CONCRETE STEP DETAIL





TYP. STORM SEWER MANHOLE FRAME & COVER

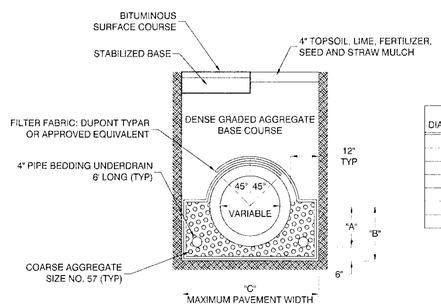
NOTES:

1- IF WATERTIGHT MANHOLE FRAMES & COVERS ARE REQUIRED, THEY SHALL BE AS MFG. BY "CAMPBELL FOUNDRY CO.", PATTERN NO. 1536, TYPE "A" OR APPROVED EQUIVALENT.

2- WHERE WATERTIGHT MANHOLE FRAME & COVER ARE NOT REQUIRED, THE MANHOLE COVER AND FRAME SHALL BE OF THE HEAVY HIGHWAY TYPE, WITH THE CIRCULAR FLARED TYPE FRAME AND ROUND FLANGE. THE COVER SHALL BE PERFORATED WITH A MINIMUM OF SIX 3/4" HOLES.

3- TO BE USED ON STREETS "CAMPBELL FOUNDRY CO." PATTERN NO. 1202 OR EQUIVALENT.

4- TO BE USED OUTSIDE OF STREET R. O. W. "CAMPBELL FOUNDRY CO." PATTERN NO. 1486 OR EQUIVALENT.

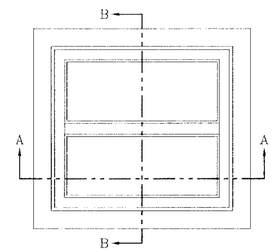


PIPE DIAMETER	DIMENSIONS		
	"A"	"B"	"C"
15"	9 3/4"	15 3/4"	43 1/2"
18"	11 1/2"	17 1/2"	47"
24"	15"	21"	54"
30"	18 1/2"	24 1/2"	61"
36"	22"	28"	68"
42"	25 1/2"	31 1/2"	75"
48"	29"	35"	82"

NOTE:

UNDERDRAIN SHALL BE CONNECTED TO EACH DOWN STREAM DRAINAGE STRUCTURE AND SHALL BE CAPPED AT THE UPSTREAM END

TYP PIPE BEDDING STORM SEWER



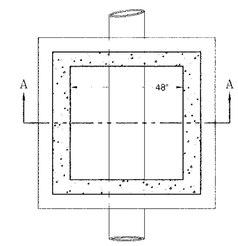
PLAN

NOTES:

1- CASTING SHALL BE "CAMPBELL FOUNDRY CO.", PATTERN NO. 3425 "BICYCLE SAFE GRATE" OR EQUIVALENT.

2- LADDER RUNGS SHALL BE POLYPROPYLENE.

3- WHERE INLETS ARE GREATER THAN 8' DEEP, DOUBLE BLOCK WALLS ARE REQUIRED.

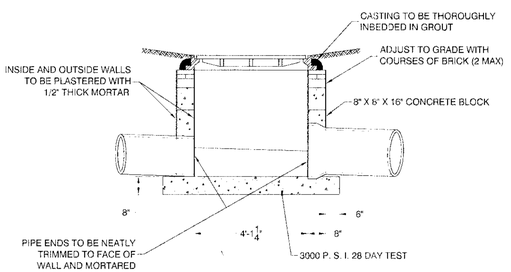


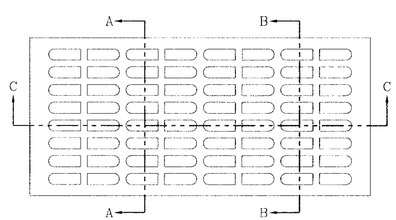
PLAN

NOTES:

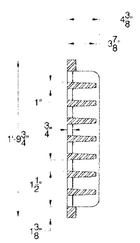
1- LADDER RUNGS SHALL BE POLYPROPYLENE.

2- WHERE MANHOLE IS GREATER THAN 8' DEEP, DOUBLE BLOCK WALLS ARE REQUIRED.

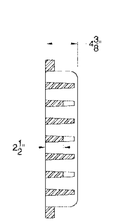




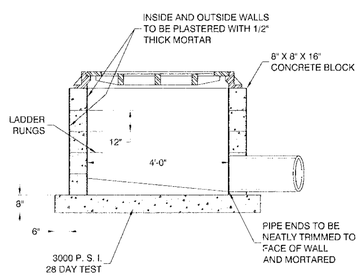
GRATE TO BE CAST IRON WITH A MINIMUM WEIGHT OF 325 LBS



SECTION "A-A"



SECTION "B-B"

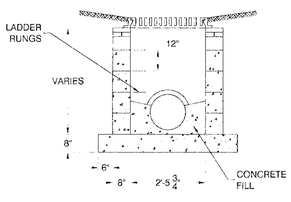


INLET TYPE "E"

SECTION "A-A"

SECTION "A-A"

4' SQUARE MANHOLE DETAIL



INLET TYPE "A"

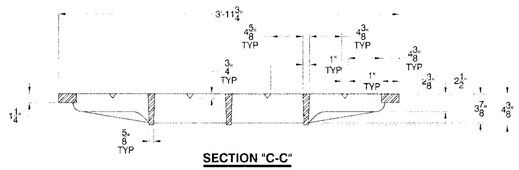
NOTES:

1- CAMPBELL CASTING PATTERN NO. 3433 FOR "STREAM FLOW GRATING" AND NO. 3408 FOR "BICYCLE SAFE GRATING" OR APPROVED EQUIVALENT.

2- LADDER RUNGS SHALL BE POLYPROPYLENE AS PER DETAIL.

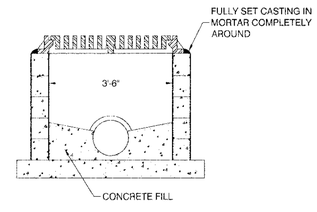
3- SPECIAL DESIGNS SHALL BE PROVIDED FOR INLETS WITH PIPE SIZES GREATER THAN 21" DIAMETER.

4- WHERE INLETS ARE GREATER THAN 8' DEEP, DOUBLE BLOCK WALLS ARE REQUIRED.



SECTION "C-C"

BICYCLE SAFE GRATE



INLET TYPE "E"

SECTION "B-B"

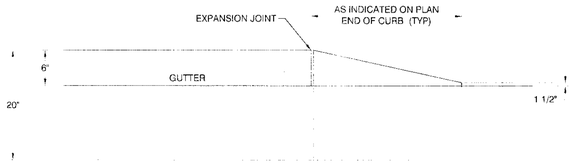
TOWNSHIP of WOODBRIDGE

DIVISION of ENGINEERING

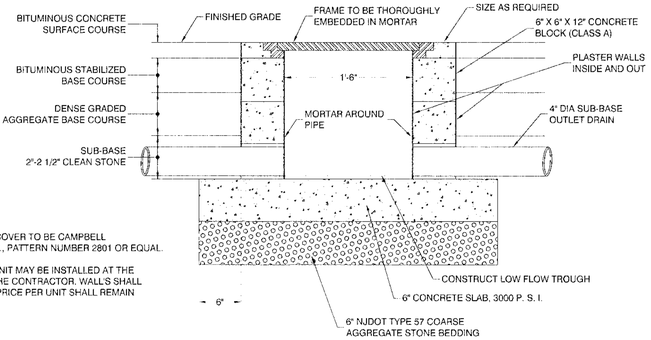
ONE MAIN STREET, WOODBRIDGE, NEW JERSEY 07095 (732) 602-6047
ROBERT A. SIMICSAK JAMES E. McGREEVEY
MUNICIPAL ENGINEER MAYOR

GENERAL CONSTRUCTION DETAILS

DESIGNED:	SITUATED IN WOODBRIDGE TOWNSHIP	DATE:
DRAWN: M. J. F.	MIDDLESEX COUNTY NEW JERSEY	SCALE: N. T. S.
CHECKED: B. PATEL		FILE NO.:
APPROVED: R. A. S.		CONTRACT NO.:
STA. to STA.	SCOTT LEE THOMPSON DATE	DRAWING NO.:
BOOK:	MUNICIPAL ENGINEER	SHEET 2 OF 6
PAGES:	N.J.P.E. LIC. No. 29141	
B. M.:		



9" X 20" KNOCKOUT CURB

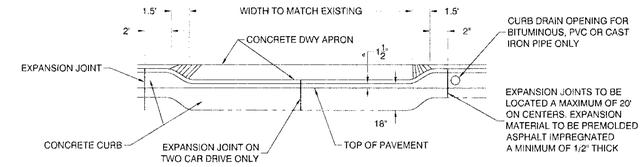


NOTES:

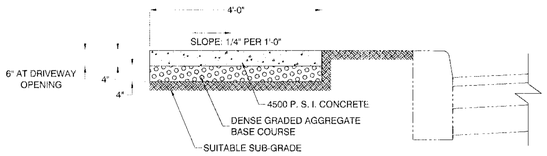
1- FRAME AND COVER TO BE CAMPBELL FOUNDRY CO., PATTERN NUMBER 2801 OR EQUAL.

2- A PRECAST UNIT MAY BE INSTALLED AT THE OPTION OF THE CONTRACTOR. WALLS SHALL BE 6" THICK, PRICE PER UNIT SHALL REMAIN THE SAME.

UNDERDRAIN HANDHOLE DETAIL



ELEVATION

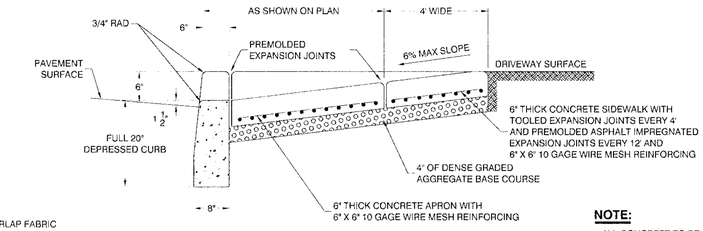


NOTES:

1- SEE DETAILS FOR HANDICAPPED RAMP.

2- 1/2" EXPANSION JOINT EVERY 24'. STEEL SEPERATORS SHALL BE USED WITH THE FORMS AT 12' INTERVALS AND A FALSE JOINT SHALL BE TOOLED IN EVERY 4'.

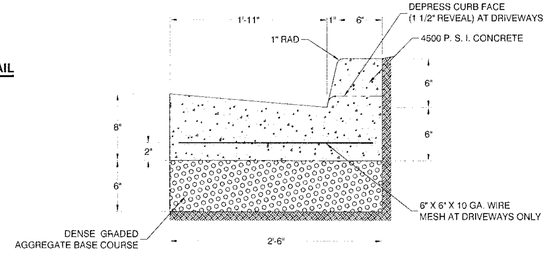
TYPICAL SIDEWALK DETAIL



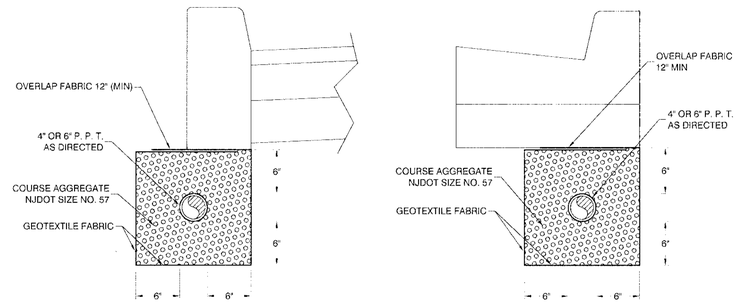
NOTE:

ALL CONCRETE TO BE 4500 P. S. I. MIN

SECTION WITH SIDEWALK



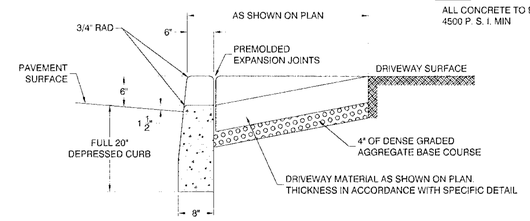
CONCRETE CURB AND GUTTER



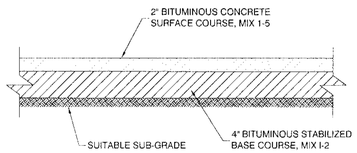
PERFORATED POLYETHYLENE TUBING UNDERDRAIN

NOTE:

ALL CONCRETE TO BE 4500 P. S. I. MIN

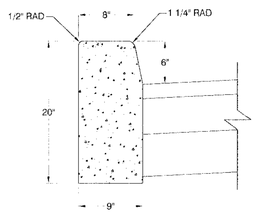


SECTION WITHOUT SIDEWALK



BITUMINOUS CONCRETE (COMMERCIAL DRIVEWAY AND PARKING LOT)

DRIVEWAY REPLACEMENT DETAIL

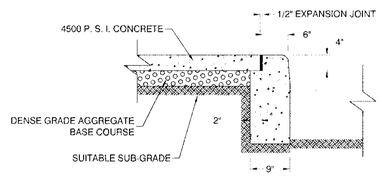


NOTES:

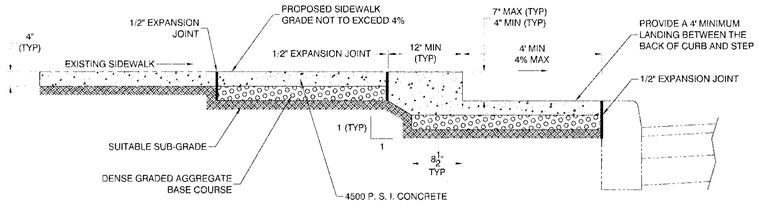
1- CONCRETE TO TEST 4500 P. S. I. MINIMUM ON 28 DAY TEST AIR ENTRAINMENT 4% TO 7%. SLUMP TO BE 5" MAXIMUM.

2- SEE DETAILS FOR HANDICAPPED RAMP.

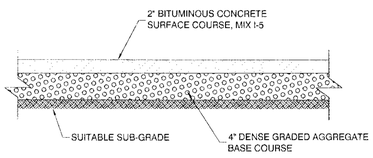
TYPICAL 9" X 20" CURB DETAIL



SIDEWALK CURB COMBINATION



TYPICAL SERVICE WALK REPLACEMENT DETAIL WITH STEP

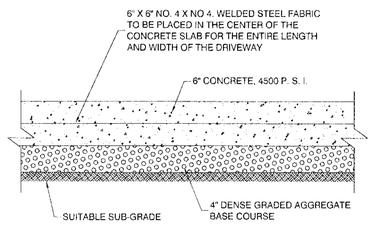


NOTE:

MIX NUMBERS IN ACCORDANCE WITH NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION

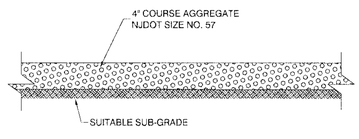
BITUMINOUS CONCRETE (SINGLE AND 2 FAMILY DRIVEWAYS)

DRIVEWAY REPLACEMENT DETAIL



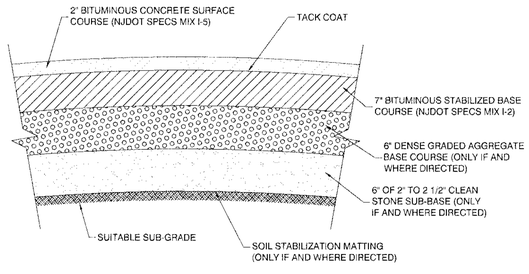
(CONCRETE DRIVEWAY)

DRIVEWAY REPLACEMENT DETAIL



(AGGREGATE DRIVEWAY)

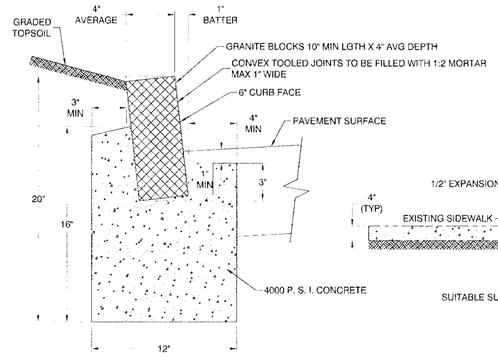
DRIVEWAY REPLACEMENT DETAIL



NOTE:

THE CROWN OFF ALL PAVEMENT SHALL BE AS INDICATED ON THE CROSS SECTIONS

TYPICAL PAVEMENT DETAIL

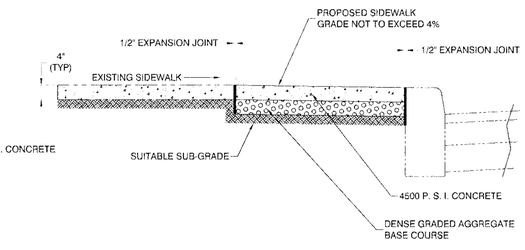


GRANITE BELGIAN BLOCK CURB DETAIL

NOTES:

1- TWO (2) AND THREE (3) STEP INSTALLATION SHALL BE IN ACCORDANCE WITH CONCRETE STEP DETAIL.

2- FOUR (4) STEPS OR GREATER SHALL BE IN ACCORDANCE WITH REINFORCED CONCRETE STEP DETAIL.



TYPICAL SERVICE WALK REPLACEMENT DETAIL

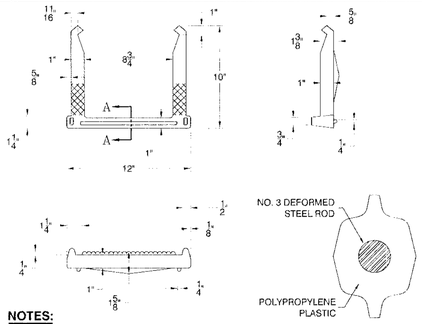
TOWNSHIP of WOODBRIDGE

DIVISION of ENGINEERING

ONE MAIN STREET, WOODBRIDGE, NEW JERSEY 07095 (732) 602-6047
ROBERT A. SIMICSAK — MUNICIPAL ENGINEER
JAMES E. McGREEVEY — MAYOR

GENERAL CONSTRUCTION DETAILS

DESIGNED:	SITUATED IN WOODBRIDGE TOWNSHIP	DATE:
DRAWN: M. J. F.	MIDDLESEX COUNTY NEW JERSEY	SCALE: N. T. S.
CHECKED: B. PATEL		
APPROVED: R. A. S.		FILE NO.:
STA. to STA.		CONTRACT NO.:
BOOK:	SCOTT LEE THOMPSON DATE	DRAWING NO.:
PAGES:	MUNICIPAL ENGINEER N.J.P.E. LIC. NO. 29141	SHEET 1 OF 6
B.M.:		

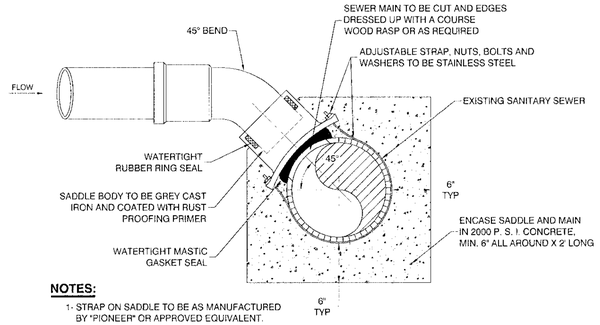


NOTES:

1- LADDER RUNG TO BE AS MANUFACTURED BY M. A. INDUSTRIES OR APPROVED EQUIVALENT.

2- IN PRECAST MANHOLES, STEPS SHALL BE DRIVEN INTO WET CONCRETE WALL DURING MANUFACTURE.

SECTION "A-A"

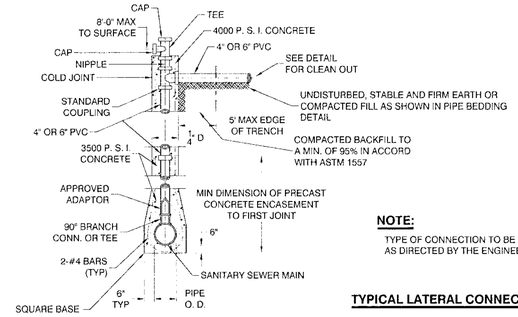


NOTES:

1- STRAP ON SADDLE TO BE AS MANUFACTURED BY "PIONEER" OR APPROVED EQUIVALENT.

2- STRAP ON SADDLE TO BE USED ON EXISTING MAINS ONLY WHERE A WYE BRANCH LATERAL CONNECTION IS NOT AVAILABLE.

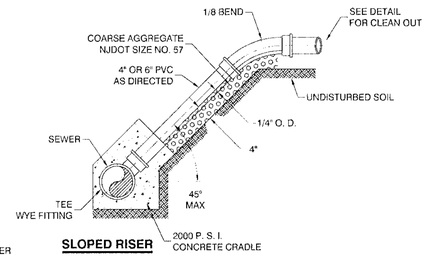
STRAP ON SADDLE DETAIL



VERTICAL RISER

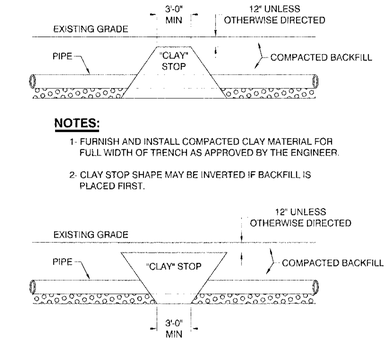
NOTE:

TYPE OF CONNECTION TO BE AS DIRECTED BY THE ENGINEER



SLOPED RISER

TYPICAL LATERAL CONNECTION WITH RISER

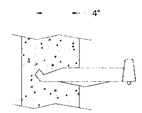


NOTES:

1- FURNISH AND INSTALL COMPACTED CLAY MATERIAL FOR FULL WIDTH OF TRENCH AS APPROVED BY THE ENGINEER.

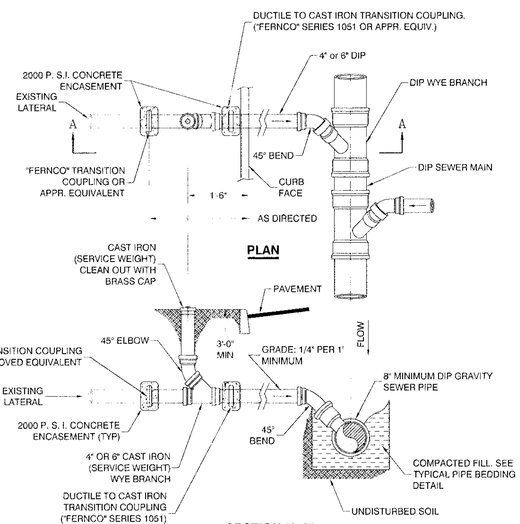
2- CLAY STOP SHAPE MAY BE INVERTED IF BACKFILL IS PLACED FIRST.

IMPERVIOUS TRENCH STOP



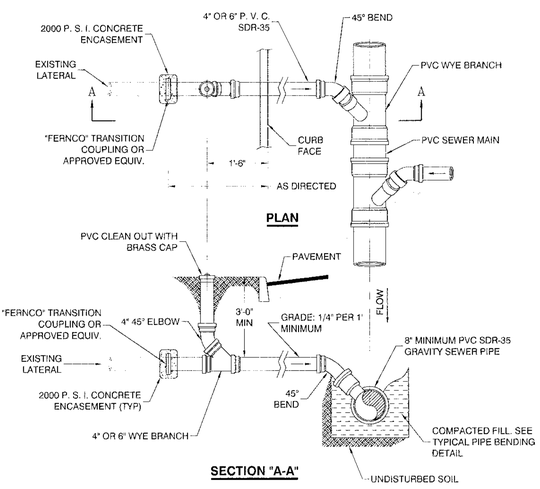
INSTALLATION

POLYPROPYLENE LADDER RUNG DETAIL



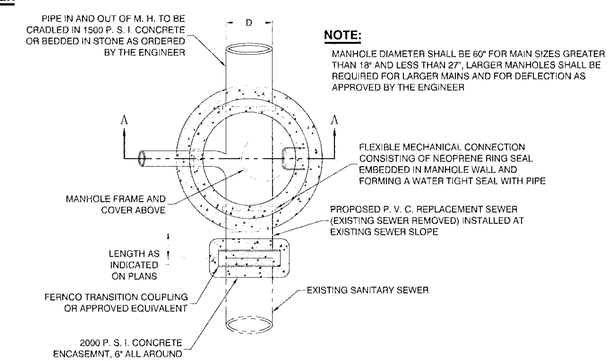
SECTION "A-A"

DUCTILE IRON SANITARY SEWER LATERAL AND CAST IRON CLEANOUT



SECTION "A-A"

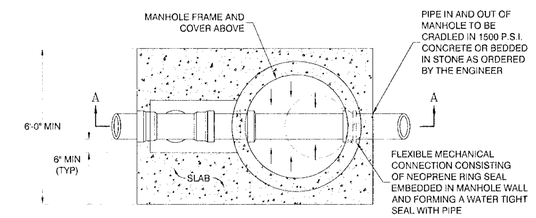
PVC SANITARY SEWER LATERAL AND CLEANOUT



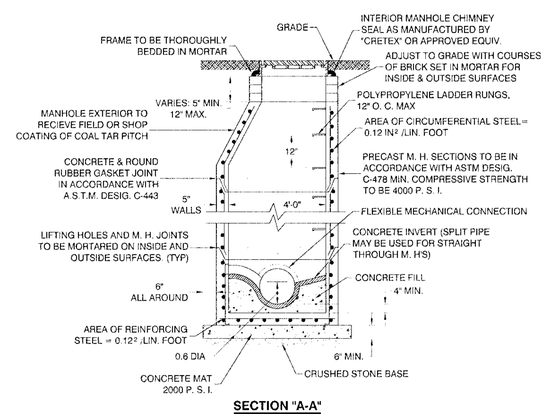
NOTE:

MANHOLE DIAMETER SHALL BE 60" FOR MAIN SIZES GREATER THAN 18" AND LESS THAN 27", LARGER MANHOLES SHALL BE REQUIRED FOR LARGER MAINS AND FOR DEFLECTION AS APPROVED BY THE ENGINEER

SECTIONAL PLAN AND CONNECTION TO EXISTING SANITARY SEWER

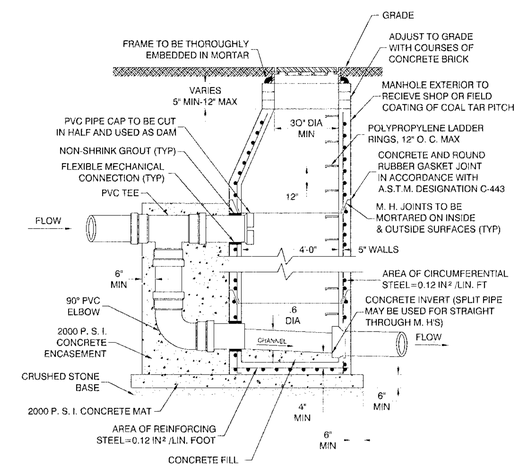


SECTIONAL PLAN



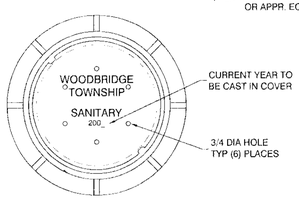
SECTION "A-A"

TYPICAL PRECAST CONCRETE SANITARY SEWER MANHOLE



SECTION "A-A"

TYPICAL PRECAST DROP MANHOLE



NOTES:

1- IF WATERTIGHT MANHOLE FRAMES & COVERS ARE REQUIRED, THEY SHALL BE AS MGF. BY CAMPBELL FOUNDRY CO. PATTERN No. 1536 TYPE "A" OR APPROVED EQUIVALENT.

2- WHERE WATERTIGHT MANHOLE FRAME & COVER ARE NOT REQUIRED, THE MANHOLE COVER AND FRAME SHALL BE OF THE HEAVY HIGHWAY TYPE, WITH THE CIRCULAR FLARED TYPE FRAME AND ROUND FLANGE. THE COVER SHALL BE PERFORATED WITH A MINIMUM OF SIX 3/4" HOLES.

3- TO BE USED ON STREETS CAMPBELL FOUNDRY CO. PATTERN No. 1202B OR EQUIVALENT.

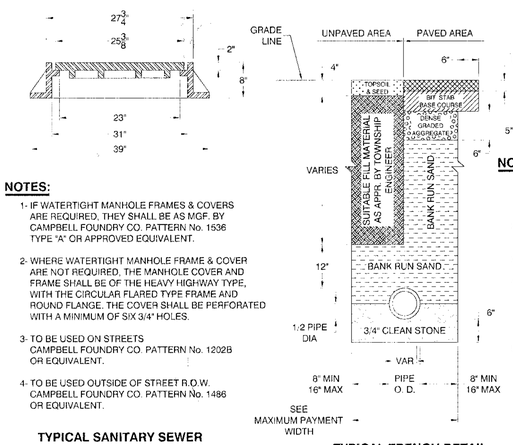
4- TO BE USED OUTSIDE OF STREET R.O.W. CAMPBELL FOUNDRY CO. PATTERN No. 1486 OR EQUIVALENT.

TYPICAL SANITARY SEWER MANHOLE FRAME AND COVER

NOTE:

WITH THE EXCEPTION OF ROCK EXCAVATION, ALL COST OF EXCAVATION SHALL BE INCLUDED IN THE PRICE PER LINEAR FOOT OF PIPE. THE COST OF BACKFILLING SHALL COMPLY WITH THE PROVISIONS OF THE SPECIFICATIONS.

MAXIMUM PAYMENT WIDTH			
STORM SEWER & SANITARY SEWER DEPTH			
PIPE	DEPTH		
DIA	1'-6'	6'-12'	12'+
8"	4'-0"	5'-0"	6'-0"
10"	4'-0"	5'-0"	6'-0"
12"	4'-0"	5'-0"	6'-0"
15"	4'-0"	5'-0"	6'-0"
18"	4'-6"	5'-0"	6'-0"
21"	4'-6"	5'-0"	6'-0"
24"	5'-0"	5'-0"	6'-0"
27"	5'-0"	6'-0"	7'-0"
30"	5'-0"	6'-0"	7'-0"
33"	5'-0"	6'-0"	7'-0"
36"	5'-0"	6'-0"	7'-0"
42"	6'-0"	6'-0"	7'-0"
48"	6'-0"	6'-0"	7'-0"



TEMPORARY PAVEMENT, MIX I-2 2" OF WHICH WILL BE MILLED AND REPLACED WITH BITUMINOUS CONC. SURFACE COURSE WHEN REQUIRED

NOTES:

1- CONTRACTOR IS RESPONSIBLE FOR ULTIMATELY PROVIDING PERMANENT PAVEMENT (UNLESS OTHERWISE NOTED IN SUPPLEMENTARY SPECIFICATIONS).

2- SEE SPECIFICATIONS FOR MILLING AND PAVEMENT SURFACE COURSE REQUIREMENTS.

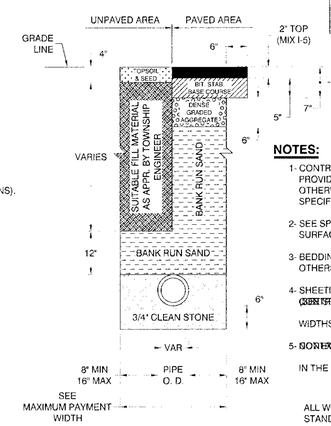
3- SEE SANITARY DETAILS FOR PVC PIPE BEDDING.

4- SHEETING TO BE PROVIDED WHERE NECESSARY (SEE SPEC. SECTION 513). IF SHEETING IS USED, THE CONTRACTOR SHALL BE PAID FOR ACTUAL TRENCH WIDTHS NOT EXCEEDING THOSE FOR 1'-6' DEPTH.

5- CONTRACTOR SHALL BE PAID FOR ACTUAL WIDTH NOT EXCEEDING THE MAXIMUM WIDTH INDICATED IN THE MAXIMUM PAYMENT CHART.

ALL WORK TO CONFORM TO WOODBRIDGE TOWNSHIP STANDARDS AND SPECIFICATIONS

TYPICAL TRENCH DETAIL



TEMPORARY PAVEMENT, MIX I-2 2" OF WHICH WILL BE MILLED AND REPLACED WITH BITUMINOUS CONC. SURFACE COURSE WHEN REQUIRED

NOTES:

1- CONTRACTOR IS RESPONSIBLE FOR ULTIMATELY PROVIDING PERMANENT PAVEMENT (UNLESS OTHERWISE NOTED IN SUPPLEMENTARY SPECIFICATIONS).

2- SEE SPECIFICATIONS FOR MILLING AND PAVEMENT SURFACE COURSE REQUIREMENTS.

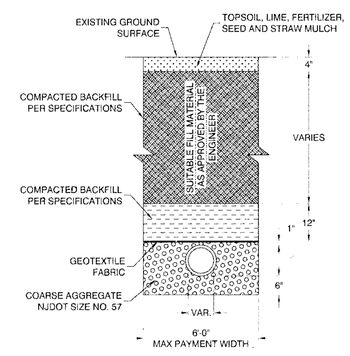
3- BEDDING SHOWN IS FOR PVC PIPE ONLY. FOR OTHERS SEE STORM SEWER DETAILS.

4- SHEETING TO BE PROVIDED WHERE NECESSARY (SEE SPEC. SECTION 513). IF SHEETING IS USED, THE CONTRACTOR SHALL BE PAID FOR ACTUAL TRENCH WIDTHS NOT EXCEEDING THOSE FOR 1'-6' DEPTH.

5- CONTRACTOR SHALL BE PAID FOR ACTUAL WIDTH NOT EXCEEDING THE MAXIMUM WIDTH INDICATED IN THE MAXIMUM PAYMENT WIDTH CHART.

ALL WORK TO CONFORM TO WOODBRIDGE TOWNSHIP STANDARDS AND SPECIFICATIONS

TYPICAL TRENCH DETAIL



UNPAVED TRENCH REPAIR

TOWNSHIP of WOODBRIDGE

DIVISION of ENGINEERING

ONE MAIN STREET, WOODBRIDGE, NEW JERSEY 07095 (732) 602-6047
ROBERT A. SIMICSAK JAMES E. McGREEVEY
MUNICIPAL ENGINEER MAYOR

GENERAL CONSTRUCTION DETAILS

DESIGNED:	SITUATED IN WOODBRIDGE TOWNSHIP	DATE:
DRAWN: M. J. F.	MIDDLESEX COUNTY NEW JERSEY	SCALE: N. T. S.
CHECKED: B. PATEL		
APPROVED: R. A. S.		FILE NO.
STA. to STA.		CONTRACT NO.
BOOK:	SCOTT LEE THOMPSON DATE	DRAWING NO.
PAGES:	MUNICIPAL ENGINEER N.J.P.E. LIC. NO. 29141	SHEET 3 OF 6
B. M.:		

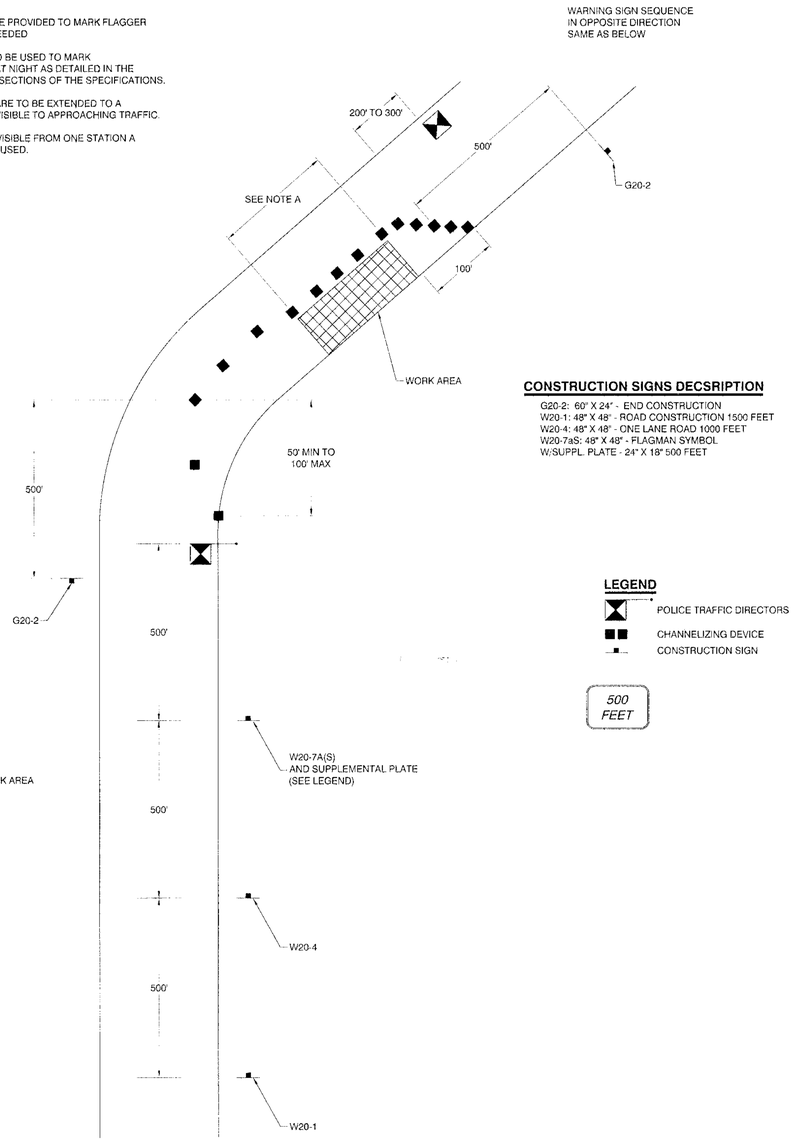
NOTES:

1- FLOOD LIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED

2- WARNING LIGHTS SHOULD BE USED TO MARK CHANNELIZING DEVICES AT NIGHT AS DETAILED IN THE NIGHT TIME OPERATIONS SECTIONS OF THE SPECIFICATIONS.

3- CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.

4- IF ENTIRE WORK AREA IS VISIBLE FROM ONE STATION A SINGLE FLAGGER MAY BE USED.



CONSTRUCTION SIGNS DECSRIPTION

G20-2: 60" X 24" - END CONSTRUCTION
W20-1: 48" X 48" - ROAD CONSTRUCTION 1500 FEET
W20-4: 48" X 48" - ONE LANE ROAD 1000 FEET
W20-7aS: 48" X 48" - FLAGMAN SYMBOL
W/SUPPL. PLATE - 24" X 18" 500 FEET

LEGEND

POLICE TRAFFIC DIRECTORS

CHANNELIZING DEVICE

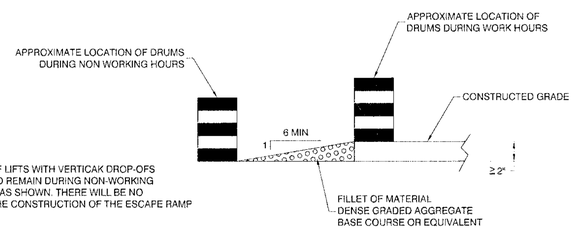
CONSTRUCTION SIGN

500 FEET

NOTE A:

CHANNELIZING DEVICES SEPERATE WORK AREA FROM TRAVELED WAY

MINIMUM REQUIREMENTS FOR TEMPORARY LANE CLOSURE



NOTE:

EXCAVATIONS OR EDGES OF LIFTS WITH VERTICAK DROP-OFS OF 2" OR MORE THAT ARE TO REMAIN DURING NON-WORKING HOURS ARE TO BE RAMPED AS SHOWN. THERE WILL BE NO SEPERATE PAYMENT FOR THE CONSTRUCTION OF THE ESCAPE RAMP

ESCAPE RAMP DETAIL

TRAFFIC CONTROL COORDINATION:

1- PRIOR TO THE START OF CONSTRUCTION, THE ENGINEER SHALL BE NOTIFIED OF THE SINGLE SUPERVISORY LEVEL INDIVIDUAL, TRAINED IN THE PRINCIPLES OF SAFE TRAFFIC CONTROL, WHO, ALONG WITH THE DIRECTION OF THE POLICE DEPARTMENT'S TRAFFIC SAFETY DIVISION, WILL BE ASSIGNED THE RESPONSIBILITY AND AUTHORITY FOR THE IMPLEMENTATION AND MAINTENANCE OF THE TRAFFIC CONTROL.

2- THE PERSON ASSIGNED SHALL MAKE A CHECK OF ALL TRAFFIC CONTROL DEVICES IN USE ON THE ENTIRE PROJECT AT LEAST TWICE A DAY ON WORKING DAYS AND ONCE A DAY ON NON-WORKING DAYS. CONTRACTOR SHALL FILE THE NAME AND TELEPHONE NUMBER OF THE PERSON ASSIGNED TO PROVIDE SERVICES.

TRAFFIC CONTROL DEVICES:

1- TRAFFIC CONTROL DEVICES SHALL BE KEPT CLEAN AND MAINTAINED IN GOOD CONDITION INCLUDING REPLACEMENT IF LOST, STOLEN OR DAMAGED UNTIL NO LONGER REQUIRED FOR THE PROJECT. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH THE DETAILS SHOWN ON THE PLANS, SUPPLEMENTARY SPECIFICATIONS, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND STANDARD DETAILS FOR TRAFFIC CONTROL DEVICES AS DEVELOPED BY THE NEW JERSEY DEPARTMENT OF TRANSPORTATION.

2- TRAFFIC CONTROL DEVICES SHALL ALSO BE PLACED AS DIRECTED BY THE ENGINEER TO PROVIDE TRAFFIC CONTROL FOR PERSONNEL DOING INSPECTIONS, SAMPLING, TESTING OR TAKING MEASUREMENTS REQUIRED FOR THE PROJECT.

CONSTRUCTION SIGNS:

1- CONSTRUCTION SIGNS SHALL BE INSTALLED BY THE CONTRACTOR AS REQUIRED BY THE POLICE DEPARTMENT AS THE FIRST ORDER OF WORK FOR CONSTRUCTION SIGNS FOR PROJECTS AND SHALL BE MAINTAINED SO AS TO PROVIDE MAXIMUM VISIBILITY AND LEGIBILITY AT ALL TIME.

2- WHEN CONSTRUCTION SIGNS CONFLICT WITH EXISTING SIGNS, THE EXISTING SIGN SHALL BE COVERED. WHEN CONSTRUCTION SIGNS ARE NO LONGER REQIRED, THEY SHALL BE REMOVED. IF THEY ARE TEMPORARILY NOT REQUIRED, SUCH AS OVERNIGHT, THEY SHALL EITHER BE TEMPORARILY REMOVED OR COVERED.

3- EACH ADVANCE WARNING SIGN (W20-1) SHALL BE LIGHTED 24 HOURS A DAY WITH DUAL ALTERNATE FLASH HIGH INTENSITY WARNING LIGHTS OF EITHER THE STROBE OR INCANDESCENT TYPE AS SELECTED BY THE CONTRACTOR.

CONSTRUCTION STAGING PLAN:

1- THE CONSTRUCTION STAGING PLAN IS BASED ON THE MINIMUM REQUIREMENTS PROVIDED IN THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THE CONTRACTOR SHALL WORK IN ACCORDANCE WITH THE PROVISIONS OF THE PLAN AND THE MUTCD AND SHALL ONLY DEVIATE FROM THE PLAN AFTER APPROVAL.

2- APPROVAL OF THE ENGINEER AND CONSENT OF THE LOCAL AUTHORITIES HAVING JURISDICTION SHALL FIRST BE OBTAINED FOR REROUTING TRAFFIC OVER DETOURS THAT ARE NOT SHOWN ON THE PLANS. ALL NECESSARY ARRANGEMENTS SHALL BE MADE WITH SUCH AUTHORITIES REGARDING THE ESTABLISHMENT, MAINTENANCE AND REPAIR OF SUCH DETOURS, THE REGULATION AND DIRECTION OF TRAFFIC THEREON, AND SIGNING. ADEQUATE DIRECTIONAL AND DETOUR SIGNS, ACCEPTABLE TO THE LOCAL AUTHORITIES, SHALL BE FURNISHED AND ERECTED AT THE LOCATIONS WHERE SUCH AUTHORITIES MAY DIRECT.

3- CONSTRUCTION STAGING PLANS SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS-SECTION 110. IF A CONFLICT ARISES BETWEEN THE PLANS AND SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

4- ITEMS AND QUANTITIES SHOWN ARE INTENDED ONLY AS A GUIDE TO THE CONTRACTOR AND ARE SUGGESTED MINIMUMS FOR THE CLOSURE OF ONE LANE AND TWO LANES OF TRAFFIC.

SUGGESTED GENERAL SEQUENCE OF CONSTRUCTION:

1- PROVIDE ADVANCE NOTIFICATION TO THE LOCAL POLICE DEPARTMENT AND THE ENGINEER PRIOR TO MODIFICATION OF EXISTING TRAFFIC PATTERNS.

2- INSTALL "ADVANCE WARNING" SIGNS.

3- ESTABLISH DETOUR ROUTES, IF AND WHERE APPROVED BY THE ENGINEER, WHERE APPLICABLE.

4- INSTALL TEMPORARY TRAFFIC CONTROL DEVICES AS APPLICABLE.

5- COMLETE INSTALLATION OF IMPROVEMENTS.

6- REMOVE TEMPORARY TRAFFIC CONTROL DEVICES, DETOUR SIGNS AND "ADVANCE WARNING" SIGNS.

GENERAL NOTES:

1- VEHICULAR AND PEDESTRIAN TRAFFIC IS TO BE MAINTAINED OVER THE EXISTING ROADWAYS AND INTO EXISTING DRIVEWAYS WITHIN THE SCOPE OF THE PROJECT AT ALL TIMES.
TRAFFIC CONTROL IS TO BE COORDINATED WITH LOCAL AUTHORITIES

2- FINAL RESPONSIBILITY FOR THE INSTALLATION OF ADEQUATE PRECAUTIONS AND FOR THE PROTECTION OF THE TRAVELING PUBLIC AND HIS OWN PERSONNEL, SHALL REST WITH THE CONTRACTOR.

3- ALTERNATE ONE-WAY TRAFFIC CONTROL MAY BE REQUIRED DURING CONSTRUCTION OPERATIONS. PERMISSION FOR COMPLETE STOPPAGE OF ONE DIRECTION OF TRAFFIC MUST BE OBTAINED FROM THE LOCAL POLICE AND THE ENGINEER AT LEAST THREE (3) DAYS PRIOR TO STOPPAGE. ALTERNATE ONE WAY TRAFFIC CONTROL WILL BE AFFECTED BY TWO UNIFORM TRAFFIC DIRECTORS, ONE AT EACH END OF THE WORK AREA. ALL TEMPORARY TRAFFIC LANES SHALL HAVE A MINIMUM UNIBSTRUCTED WIDTH OF 11 FEET.

4- SITE FOR THE STORAGE OF EQUIPMENT AND MATERIALS DURING THE PROGRESS OF THE WORK SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.

5- COMPLIANCE WITH ALL PRESCRIBED SAFETY PRECAUTIONS CONTAINED HEREIN SHALL NOT RELIEVE THE CONTRACTOR OF HIS PRIMARY RESPONSIBILITY TO TAKE ALL NECESSARY MEASURES TO PROTECT AND SAFEGUARD THE PUBLIC NOR RELIEVE HIM OF ANY RESPONSIBILITIES DESCRIBED IN THE CONTRACT AGREEMENTS.

6- IF THE LOCAL POLICE DEPARTMENT NOTIFIES THE CONTRACTOR OR HIS SUPERINTENDENT OR THE ENGINEER OF ANY HAZARDOUS CONDITION OR VIOLATION OF TRAFFIC CONTROL IN THE WORK AREA REGULATIONS, ALL OPERATIONS SHALL BE IMMEDIATELY DISCONTINUED AND IMMEDIATE REMEDIAL ACTION SHALL BE TAKEN TO THE SATISFACTION OF THE LOCAL POLICE BEFORE WORK IS RESUMED. ALL COSTS INCURRED AS A RESULT OF SUCH ACTION SHALL BE BORNE BY THE CONTRACTOR WITHOUT RECOURSE AGAINST THE OWNER.

7- REDUCTION OF THE NIMBER OF LANES AVAILABLE FOR TRAFFIC OR REDUCTION OF EXISTING WIDTHS OF TRAVELED WAY WILL NOT BE PERMITTED UNTIL AFTER 9:00 AM AND SHALL BE REMOVED PRIOR TO 4:00 PM UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

8- WORK WHICH WILL INTERFERE WITH WITH TRAFFIC OR RESTRICT THE WITH OF TRAVELED WAY AVAILABLE FOR TRAFFIC SHALL NOT BE PERFORMED ON SATURDAYS, SUNDAYS OR LEGAL HOLIDAYS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

9- PRIOR TO BEGINNING A SEASONAL SHUTDOWN OR ANY OTHER PROLONGED WORK STOPPAGE, OR WHEN WORK IS SUSPENDED BY THE ENGINEER, ALL EXCAVATED AREAS WITHIN THE TRAVELED WAY OR ADJACENT THERETO SHALL BE BROUGHT TO A GRADE COMPATIBLE WITH THE EXISTING TRAVELED WAY OR TO FINISHED GRADE, AS APPROVED.

10- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE WITHIN THE PROJECT LIMITS UNTIL ACCEPTANCE. THIS MAINTENANCE SHALL CONSIST OF CONTINUOUS AND EFECTIVE WORK PROSECUTED DAY TO DAY, WITH ADEQUATE EQUIPMENT AND FORCES TO THE END THAT THE ROADWAY IS KEPT IN SATISFACTORY CONDITION AT ALL TIMES.

11- IN THE CASE OF A CONTRACT REQUIRING THE PLACING OF A COARSE UPON A COARSE OF SUBGRADE PREVIOUSLY CONSTRUCTED, THE CONTRACTOR SHALL MAINTAIN THE PREVIOUS COURSE OF SUBGRADE DURING ALL CONSTRUCTION OPERATIONS.

12- THE CONTRACTOR SHALL BACKFILL ALL EXCAVATED AREAS WITHIN THE ROADWAY TO A GRADE COMPATIBLE WITH THE EXISTING TRAVELED WAY AT SUCH TIMES HE IS NOT ACTIVELY WORKING. THIS SHALL INCLUDE NIGHTS, WEEKENDS AND PERIODS OF SHUTDOWNS.

13- COMPETENT, TRAINED AND UNIFORMED TRAFFIC DIRECTORS SHALL BE EMPLOYED AT EVERY POINT WHERE CONTRACTOR'S EQUIPMENT IS WORKING IMMEDIATELY ADJACENT TO, OR IS ENTERING, LEAVING OR CROSSING ACTIVE TRAFFIC LANES. TRAFFIC DIRECTORS SHALL BE EMPLOYED CONTINUOUSLY FOR THE FULL TIME SUCH CONDITIONS EXIST AS DETERMINED BY THE ENGINEER.

THE USE OF UNIFORMED POLICE OFFICERS AS TRAFFIC DIRECTORS IS NOT A SPECIFIC REQUIREMENT OF THIS PROJECT. HOWEVER, SHOULD THEY BE DEEMED NECESSARY DUE TO IMPROPER ACTIONS OF THE CONTRACTORS TRAFFIC DIRECTORS OR SHOULD THE CONTRACTOR DESIRE THE ASISTANCE OF UNIFORMED POLICE OFFICERS AS TRAFFIC DIRECTORS, THE POLICE TRAFFIC DIRECTORS SHALL BE OFF DUTY POLICE OFFICERS FROM WITHIN THE MUNICIPALITY WHERE THE WORK IS BEING PERFORMED. POLICE TRAFFIC DIRECTORS SHALL BE LOCATED WHERE SHOWN ON THE PLANS OR AT SPECIFIC LOCATIONS DESIGNATED BY THE POLICE DEPARTMENT OR ENGINEER DURING CONSTRUCTION HOURS. THE MUNICIPALITY SHALL BE CONTACTED IN ORDER TO OBTAIN THE SERVICES OF POLICE TRAFFIC DIRECTORS AND THE NAME, ADDRESS AND TELEPHONE NUMBER OF THEIR LOCAL REPRESENTATIVE.

14- THE OWNERS OF ADJOINING PROPERTIES SHALL BE GIVEN A WRITTEN NOTICE AT LEAST 3 DAYS PRIOR TO THE BEGINNING OF ANY WORK WHICH INTERFERES WITH THE OWNERS NORMAL PASSAGE.

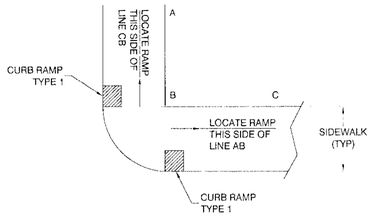
TOWNSHIP of WOODBRIDGE

DIVISION of ENGINEERING

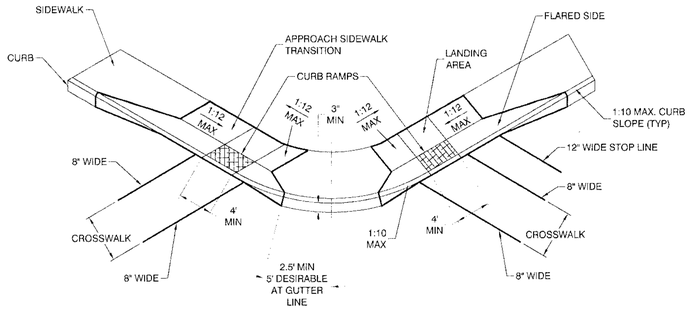
ONE MAIN STREET, WOODBRIDGE, NEW JERSEY 07095 (732) 602-6047
ROBERT A. SIMICSAK JAMES E. McGREEVEY
MUNICIPAL ENGINEER MAYOR

GENERAL CONSTRUCTION DETAILS

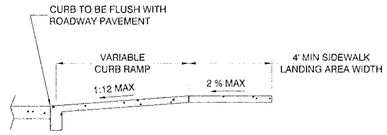
DESIGNED:	SITUATED IN WOODBRIDGE TOWNSHIP	DATE:
DRAWN: M. J. F.	MIDDLESEX COUNTY NEW JERSEY	SCALE: N. T. S.
CHECKED: B. PATEL		FILE NO.:
APPROVED: R. A. S.		CONTRACT NO.:
STA. to STA.		DRAWING NO.:
BOOK:	SCOTT LEE THOMPSON DATE	SHEET 6 OF 6
PAGES:	MUNICIPAL ENGINEER	
B. M.:	N.J.P.E. LIC. NO. 29141	



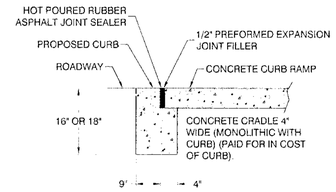
DETAIL "A"



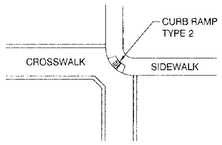
CURB RAMP-TYPE 1



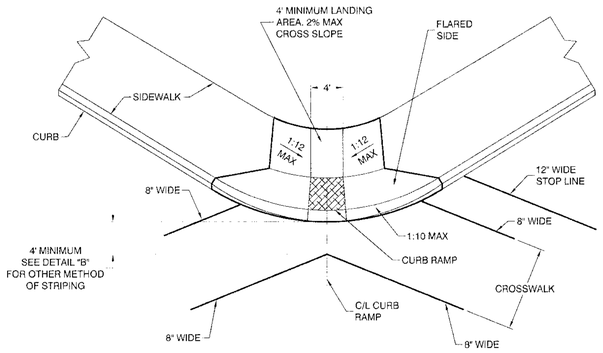
SECTION THROUGH CURB RAMP



DETAIL OF DROPPED CURB AND CRADLE



DETAIL "B"



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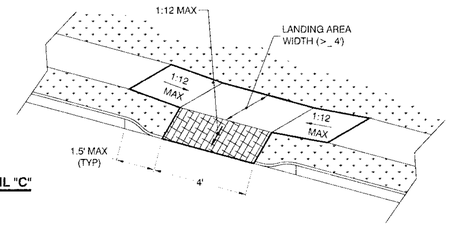
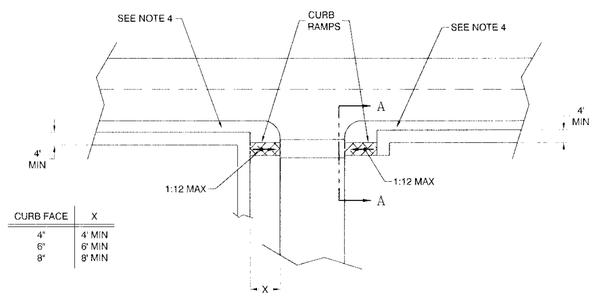


DETAIL "C"

CURB RAMP TREATMENT-GRASS BUFFER STRIP
4' MINIMUM SIDEWALK LANDING AREA

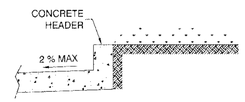
NOTE:
CURB RAMP OPENING TO BE FLUSH WITH ROADWAY PAVEMENT

SECTION "A-A"

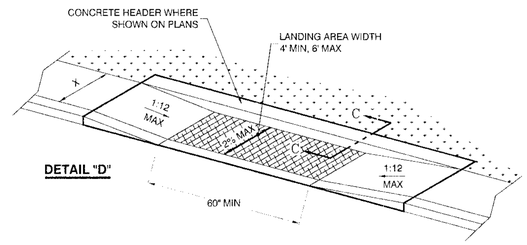


CURB FACE	X
4"	4' MIN
6"	6' MIN
8"	8' MIN

CURB RAMP-TYPE 3

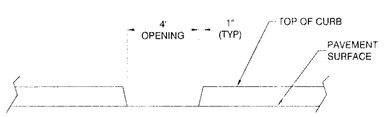


SECTION "C-C"



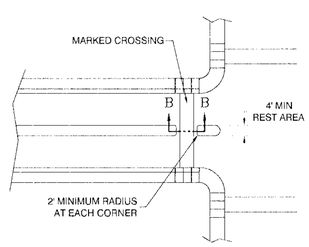
DETAIL "D"

CURB RAMP TREATMENT-LIMITED R. O. W.
WHEN "X" IS 6 FEET OR LESS



NOTE:
4' WIDE OPENING TO BE FLUSH WITH ROADWAY PAVEMENT

SECTION "B-B"



ISLAND WALKWAY OPENING
AT INTERSECTIONS

GENERAL NOTES:

1- LANDING AREA, APPROACH SIDEWALK TRANSITIONS AND CURB RAMP SHALL BE KEPT CLEAR OF OBSTRUCTIONS.

2- WHERE A GRASS BUFFER STRIP EXISTS AT A CURB RAMP TYPE 1 OR 2 LOCATION, THE FLARED SIDE SHOULD BE ALTERED AS SHOWN IN "DETAIL C".

3- CURB (DROPPED CURB) GUTTERLINE TO BE FLUSH WITH ROADWAY PAVEMENT A MINIMUM OF 4' AT ALL CURB RAMPS, EXCEPT THAT THE "DETAIL D" SHALL BE A MINIMUM OF 5 FEET.

4- FOR CURB RAMP TYPE 3, 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 APPROPIATE ADJACENT THICKNESS.

6- CURB AND HEADER WITHIN AREA ENCLOSED BY HEAVY LINES TO BE PAID FOR AS VERTICAL CURB OF THE APPROPIATE ADJACENT SIZE AND KIND.

7- WHERE THE DISTANCE FROM THE GUTTER LINE TO THE OUTSIDE EDGE OF SIDEWALK IS 6 FEET OR LESS AT A CURB RAMP TYPE 1 OR 2 LOCATION, THE FLARED SIDE SHOULD BE ALTERED AS SHOWN IN "DETAIL D".

8- THE PUBLIC SIDEWALK CURB RAMP DELINEATION (SHADED AREA) SHALL BE SAFETY RED IN COLOR.

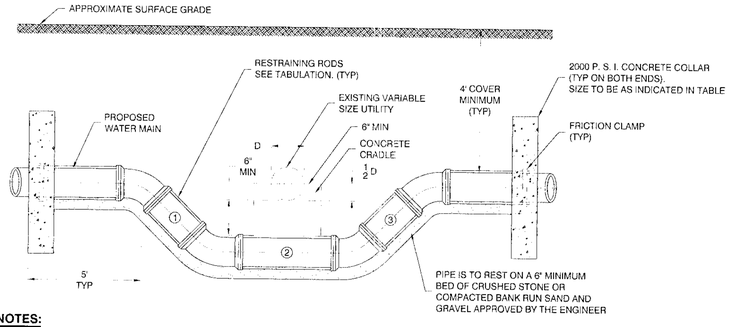
9- CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED, SEE PLANS.

PUBLIC SIDEWALK
CURB RAMPS

TOWNSHIP of WOODBRIDGE
DIVISION of ENGINEERING
ONE MAIN STREET, WOODBRIDGE, NEW JERSEY 07095 **(732) 602-6047**
ROBERT A. SIMICSAK **JAMES E. McGREEVEY**
MUNICIPAL ENGINEER **MAYOR**

GENERAL CONSTRUCTION DETAILS

DESIGNED:	SITUATED IN WOODBRIDGE TOWNSHIP	DATE:
DRAWN: M. J. F.	MIDDLESEX COUNTY NEW JERSEY	SCALE: N. T. S.
CHECKED: B. PATEL		
APPROVED: R. A. S.		FILE NO.:
STA. to STA		CONTRACT NO.:
BOOK:	SCOTT LEE THOMPSON DATE	DRAWING NO.:
PAGES:	MUNICIPAL ENGINEER N.J.P.E. LIC. NO. 29141	SHEET 5 OF 6
B. M.:		



NOTES:

1- PIPE SECTIONS (1) AND (3) VARIABLE TO BE DETERMINED IN FIELD BY ENGINEER.

2- PIPE SECTION (2) TO BE (UTILITY PIPE OUTSIDE DIAMETER (IN FT)+2.0') MINIMUM LENGTH.

3- CONCRETE CRADLE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 P. S. I.

4- RESTRAINING RODS SHALL BE UTILIZED.

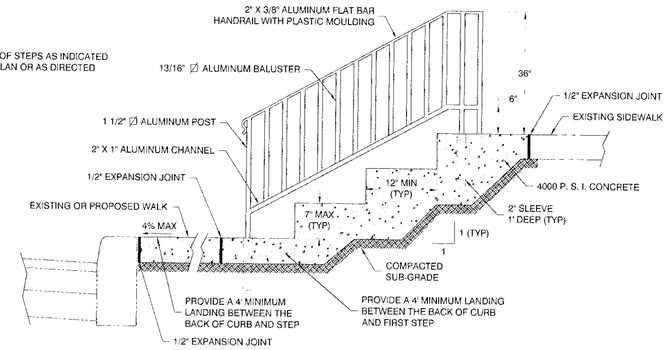
WATER MAIN SIZE	RESTRAINING RODS (A-307)		CONCRETE THRUST COLLAR (2000 P.S.I. MIN.)		
	NO.	SIZE (IN.)	W (FT)	H (FT)	t (FT)
8" & LESS	2	5/8	3.5	2.5	1.5
10" TO 12"	2	5/8	4	3	1.5

WATER MAIN SIZE	RESTRAINING RODS (A-307)		CONCRETE THRUST COLLAR (2000 P.S.I. MIN.)		
	NO.	SIZE (IN.)	W (FT)	H (FT)	t (FT)
14" TO 16"	4	5/8	5	4	2
18" TO 20"	4	3/4	6.5	4	2

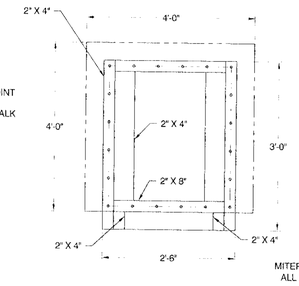
UTILITY CROSSING

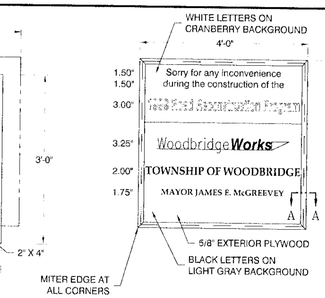
NOTE:

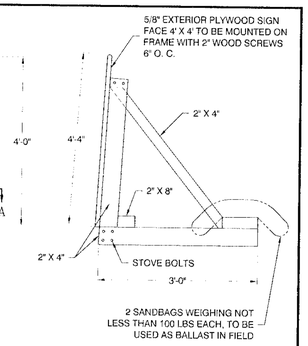
NUMBER OF STEPS AS INDICATED ON THE PLAN OR AS DIRECTED

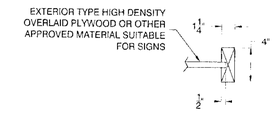


CONCRETE STEP DETAIL



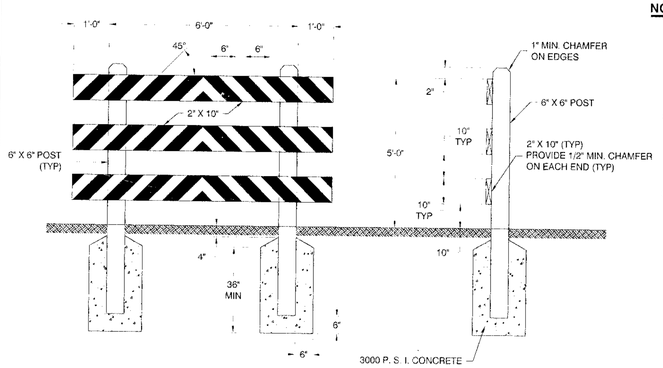






PROJECT SIGN DETAIL

SECTION "A-A"



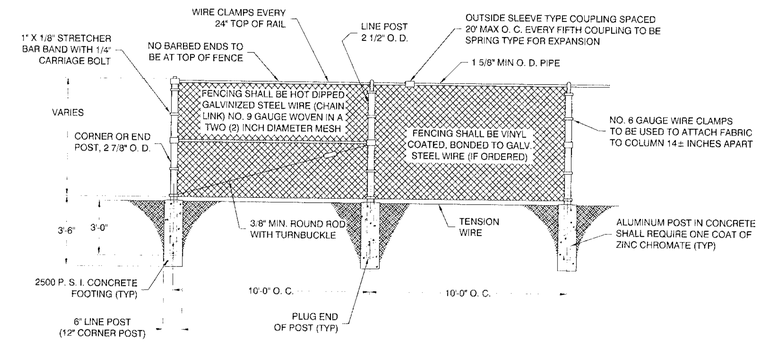
PERMANENT BARRICADE TYPE III MODIFIED FOR DEAD END ROADS

NOTES:

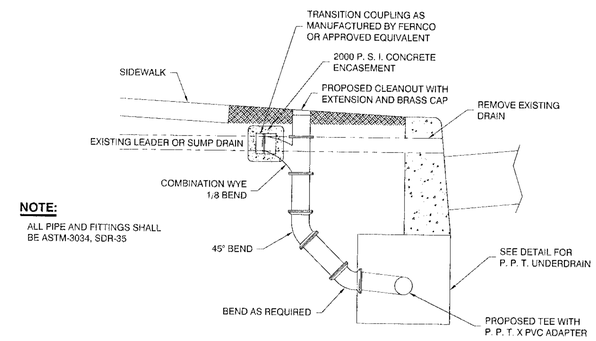
1- ALL MEMBERS TO BE SOUTHERN YELLOW PINE PRESSURE TREATED CHROMATED COPPER ARSENATE (CCA) PRESERVATIVE TO 0.40 P. C. F. RETENTION IN ACCORDANCE WITH AWPI-LP-22 PROCESS. ALL RAILS TO BE MOUNTED AS DIRECTED BY THE ENGINEER. CONNECTIONS TO BE MADE WITH 3/4" LAG BOLTS IN COUNTERSUNK HOLES.

2- FACE OF RAILS SHALL BE COVERED WITH REFLECTORIZED SHEETING, TYPE II, MEETING REQUIREMENTS OF THE NJDOT AND MUTCD. OTHER PARTS SHALL BE PAINTED WHITE, 3 COATS. MARKINGS FOR RAILS SHALL BE ALTERNATE WHITE AND RED STRIPES SLOPING DOWNWARD AT AN ANGLE OF 45° IN THE DIRECTION IN WHICH TRAFFIC MUST TURN.

3- THE RED AND WHITE STRIPES SHALL BE REFLECTORIZED SO AS TO BE VISIBLE UNDER NORMAL ATMOSPHERIC CONDITIONS FROM A MINIMUM DISTANCE OF 1000 FT. WHEN ILLUMINATED BY THE LOW BEAMS OF STANDARD AUTOMOBILE HEADLIGHTS.



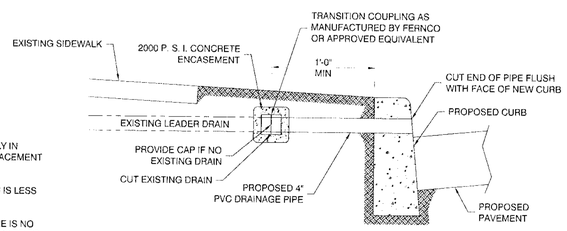
CHAIN LINK FENCE DETAIL



NOTE:

ALL PIPE AND FITTINGS SHALL BE ASTM-3034, SDR-35

CONNECTION OF SUMP OR LEADER DRAINS TO PROPOSED P. P. T. UNDERDRAIN



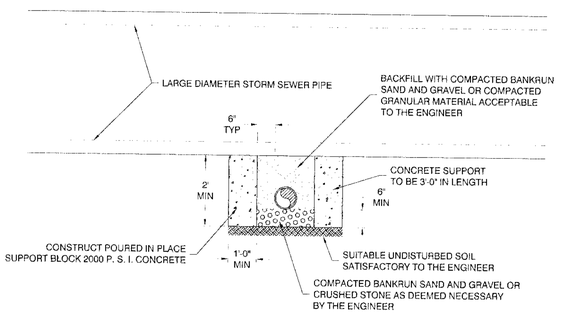
NOTES:

1- DRAINS TO BE RECONSTRUCTED ONLY IN AREAS OF CURB REMOVAL AND REPLACEMENT AS INDICATED ON PLANS.

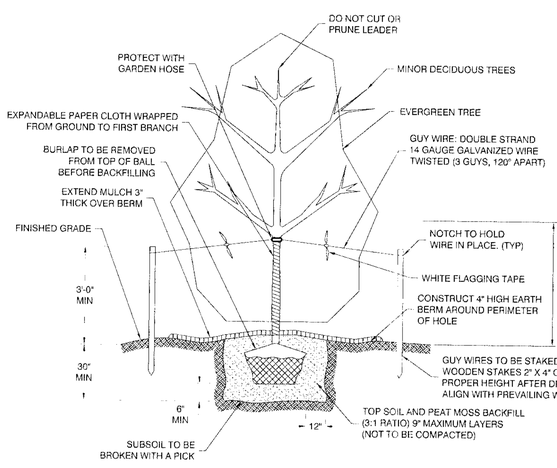
2- PROVIDE ADAPTER IF EXISTING DRAIN IS LESS THAN 4" DIAMETER.

3- IF SIDEWALK IS PROPOSED AND THERE IS NO EXISTING DRAIN, PIPE SHALL BE INSTALLED TO BACK EDGE OF SIDEWALK AND CAPPED.

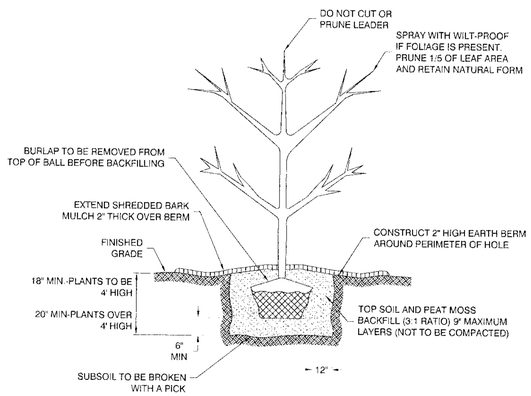
LEADER OR SUMP DRAIN RECONSTRUCTION DETAIL



CONCRETE SUPPORT BLOCK DETAIL

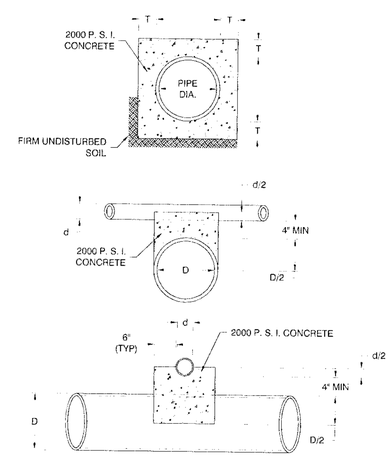


TYPICAL TREE PLANTING DETAIL



TYPICAL SHRUB PLANTING DETAIL

DIMENSIONS													
DIA.	6"	8"	10"	12"	15"	18"	21"	24"	27"	30"	36"	42"	48"	54"
T	5"	5.5"	5.5"	6"	6"	6"	6"	6"	6"	7"	8"	9"	10"	12"



CONCRETE ENCASEMENT & CRADLE

TOWNSHIP of WOODBRIDGE
DIVISION of ENGINEERING

ONE MAIN STREET, WOODBRIDGE, NEW JERSEY 07095
ROBERT A. SIMICSAK
MUNICIPAL ENGINEER

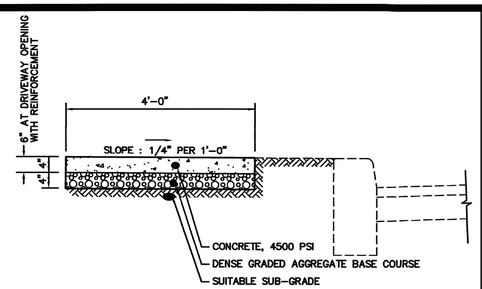
(732) 602-6047
JAMES E. McGREEVEY
MAYOR

GENERAL CONSTRUCTION DETAILS

DESIGNED:	SITUATED IN WOODBRIDGE TOWNSHIP	DATE:
DRAWN: M. J. F.	MIDDLESEX COUNTY NEW JERSEY	SCALE: N. T. S.
CHECKED: B. PATEL		
APPROVED: R. A. S.		FILE NO.:
STA. to STA.		CONTRACT NO.:
BOOK:		DRAWING NO.:
PAGES:		SHEET 4 OF 6
B. M.:		

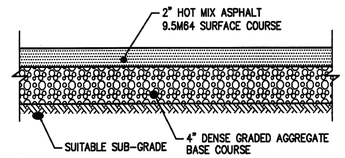
SCOTT LEE THOMPSON
MUNICIPAL ENGINEER
N.J.P.E. LIC. No. 29141

DATE



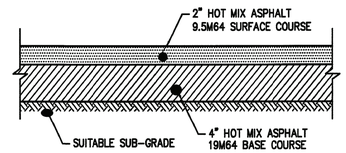
NOTES :
SEE DETAILS FOR HANDICAPPED RAMP

TYPICAL SIDEWALK DETAIL
N.T.S.



= HMA DRIVEWAY =
(SINGLE & 2-FAMILY DRIVEWAYS)

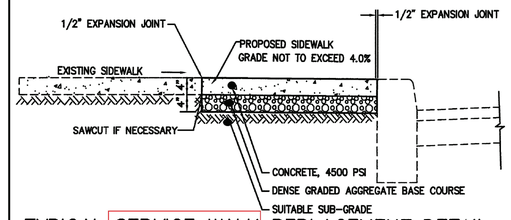
DRIVEWAY REPLACEMENT DETAIL
N.T.S.



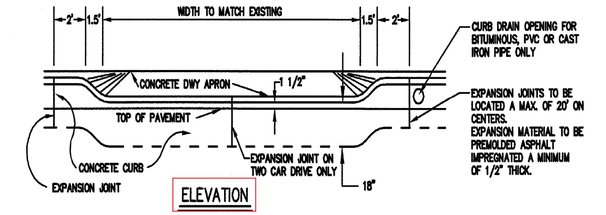
= HMA DRIVEWAY =
(COMMERCIAL DRIVEWAY & PARKING LOT)

DRIVEWAY REPLACEMENT DETAIL
N.T.S.

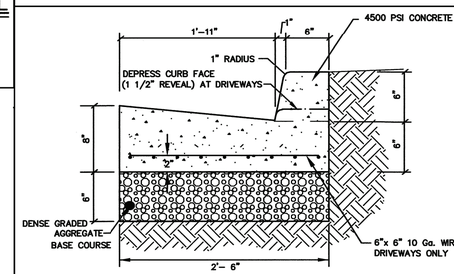
ASHPHALT DRIVEWAY



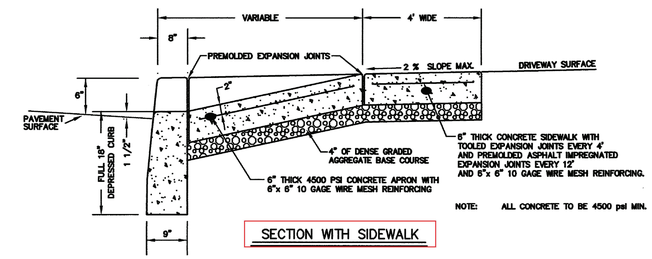
TYPICAL SERVICE WALK REPLACEMENT DETAIL
N.T.S.



ELEVATION

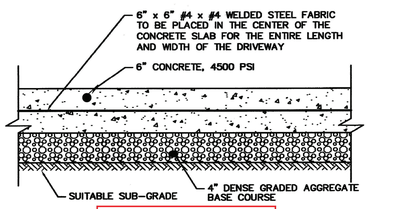


CONCRETE CURB & GUTTER
N.T.S.



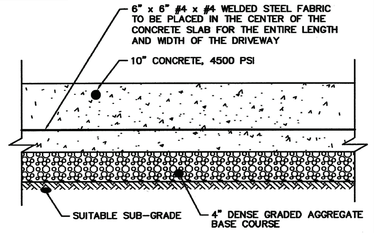
NOTE: ALL CONCRETE TO BE 4500 psi MIN.

SECTION WITH SIDEWALK



= CONCRETE DRIVEWAY =

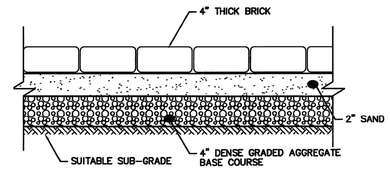
DRIVEWAY REPLACEMENT DETAIL
N.T.S.



= CONCRETE DRIVEWAY =
(COMMERCIAL DRIVEWAY & PARKING LOT)

DRIVEWAY REPLACEMENT DETAIL
N.T.S.

CONCRETE DRIVEWAY

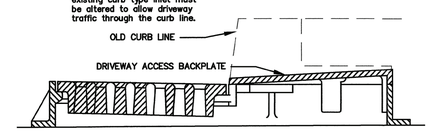


=BRICK PAVER DRIVEWAY=

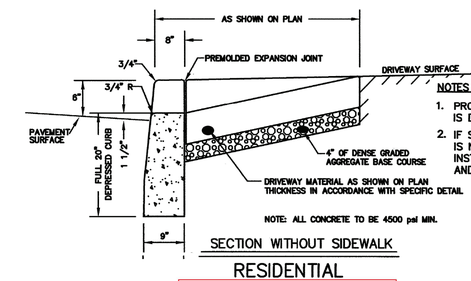
DRIVEWAY REPLACEMENT DETAIL
N.T.S.

BRICK PAVER DRIVEWAY

NOTE:
The Driveway Access Backplate is for use only where an existing curb type inlet must be altered to allow driveway traffic through the curb line.



DRIVEWAY ACCESS BACKPLATE
N.T.S.



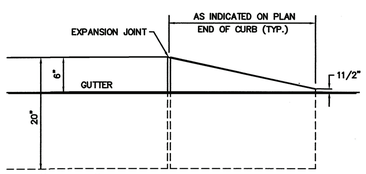
NOTE: ALL CONCRETE TO BE 4500 psi MIN.

SECTION WITHOUT SIDEWALK

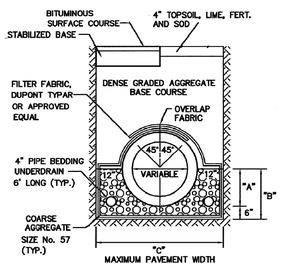
NOTES :
1. PROVIDE ADAPTER IF EXISTING DRAIN IS DIFFERENT THAN 4" DIAMETER.
2. IF SIDEWALK IS PROPOSED AND THERE IS NO EXISTING DRAIN, PIPE SHALL BE INSTALLED TO BACK EDGE OF SIDEWALK AND CAPPED.

RESIDENTIAL DRIVEWAY ENTRANCE

DEPRESSED CURB, DRIVEWAY APRON & SIDEWALK
N.T.S.

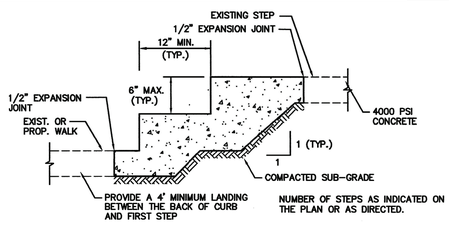


9"x 20" KNOCKOUT CURB
N.T.S.



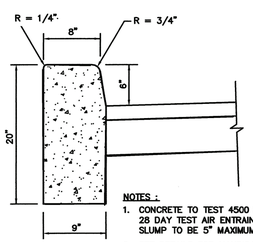
TYPICAL PIPE BEDDING
STORM SEWER
N.T.S.

PIPE DIAMETER	DIMENSIONS "A"	"B"	"C"
14"x23"	9-3/4"	15-3/4"	52-1/2"
15"	9-3/4"	15-3/4"	43-1/2"
16"x27"	11"	17"	57"
18"	11-1/2"	17-1/2"	47"
21"	13-1/4"	19-1/4"	50-1/2"
24"	15"	21"	54"
30"	18-1/2"	24-1/2"	61"
36"	22"	28"	68"
42"	25-1/2"	31-1/2"	75"
48"	29"	35"	82"
29"x45"	29"	35"	82"
34"x53"			



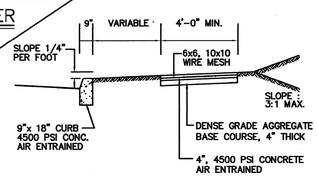
CONCRETE STEP DETAIL
N.T.S.

GRANITE BLOCK CURB
N.T.S.



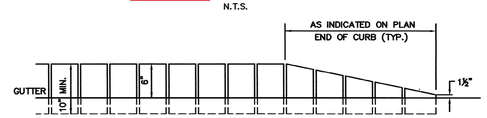
NOTES :
1. CONCRETE TO TEST 4500 PSI MINIMUM ON 28 DAY TEST AIR ENTRAINMENT 4% TO 7% SLUMP TO BE 5" MAXIMUM
2. SEE DETAILS FOR HANDICAPPED RAMP

TYPICAL 9"x 20" CURB DETAIL
N.T.S.

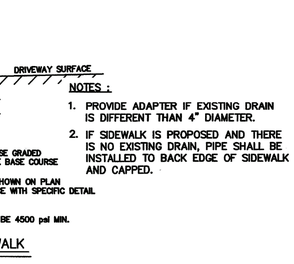


NOTE:
1. HANDICAP RAMPS SHALL BE REINFORCED WITH WIRE MESH. REFER TO DETAILS FOR HANDICAP RAMP CONSTRUCTION.
2. TRANSVERSE EXPANSION JOINTS 1/2" WIDE SHALL BE PROVIDED AT INTERVALS OF NOT MORE THAN 20' AND FILLED WITH PREFORMED BITUMINOUS CELLULAR TYPE JOINT FILLER. LONGITUDINAL JOINTS, 1/2" WIDE, SHALL 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 (SIKAFLEX 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.

SIDEWALK DETAIL
REINFORCED COUNTY CONCRETE
N.T.S.

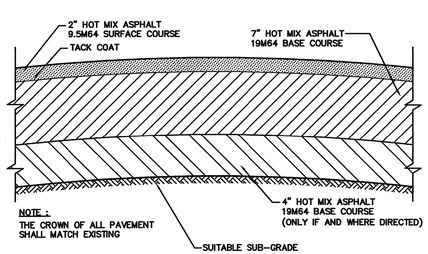


GRANITE BLOCK KNOCKOUT CURB
N.T.S.



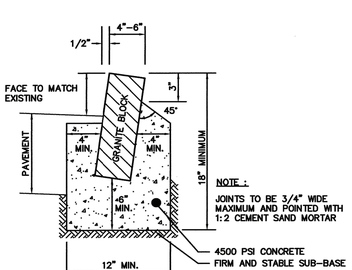
NOTES :
1. PROVIDE ADAPTER IF EXISTING DRAIN IS DIFFERENT THAN 4" DIAMETER.
2. IF SIDEWALK IS PROPOSED AND THERE IS NO EXISTING DRAIN, PIPE SHALL BE INSTALLED TO BACK EDGE OF SIDEWALK AND CAPPED.

LEADER OR SUMP DRAIN RECONSTRUCTION DETAIL
N.T.S.



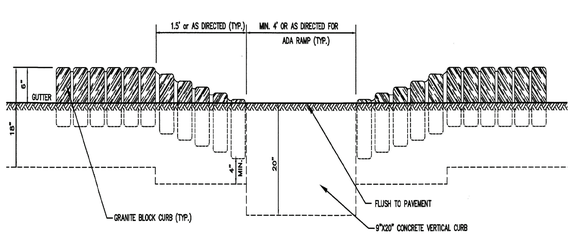
NOTE :
THE CROWN OF ALL PAVEMENT SHALL MATCH EXISTING

TYPICAL PAVEMENT DETAIL
N.T.S.

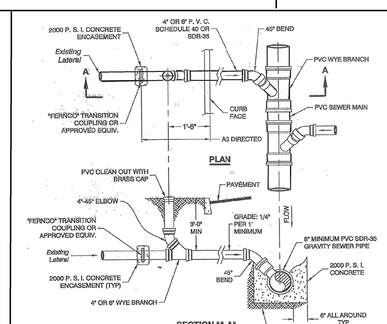


NOTE :
JOINTS TO BE 3/4" WIDE MAXIMUM AND POINTED WITH 1:2 CEMENT SAND MORTAR

GRANITE BLOCK CURB
N.T.S.



GRANITE BLOCK AND CONCRETE CURB AT RAMP
N.T.S.



PVC SANITARY SEWER LATERAL AND CLEANOUT
N.T.S.

No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
1					

TOWNSHIP of WOODBRIDGE
DIVISION of ENGINEERING
ONE MAIN STREET, WOODBRIDGE, NJ 07095 (732) 602-6047
MICHAEL GELIN, PE — JOHN E. McCORMAC
MUNICIPAL ENGINEER — MAYOR

GENERAL CONSTRUCTION DETAILS
(for ROAD OPENING & SIDEWALK PERMIT)

MICHAEL GELIN, P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. NO. 04892800

TOWN CONTRACT #:	
FILE #:	
SCALE: As Shown	DATE: April 2017
DRAWN BY: M.F.	DESIGNED BY: Bask
CHECKED BY: Bask	SHEET #: 1 of 1

Bask Patel, April 2017