



**North Sewickley Township  
Beaver County, PA**

**Standard Details**



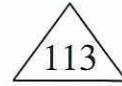
US HIGHWAY



INTERSTATE HIGHWAY



STATE ROUTES



TOWNSHIP ROADS



SITE DIRECTION



TOWNSHIP BUILDING



AIRPORT



HOSPITAL



STATE PARK



FORESTS



MOUNTAINS



RECYCLING CENTER



WATER WELL



SEPTIC DRAINFIELD/  
SYSTEM



PERC TEST HOLE/  
PIT



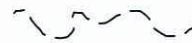
SCALE



OPEN GAS, OIL,  
WATER WELL



CULVERT



STREAM



PROPERTY LINE  
MONUMENT/PIN



SETBACK LINE



UTILITY LINES  
ABOVE GROUND

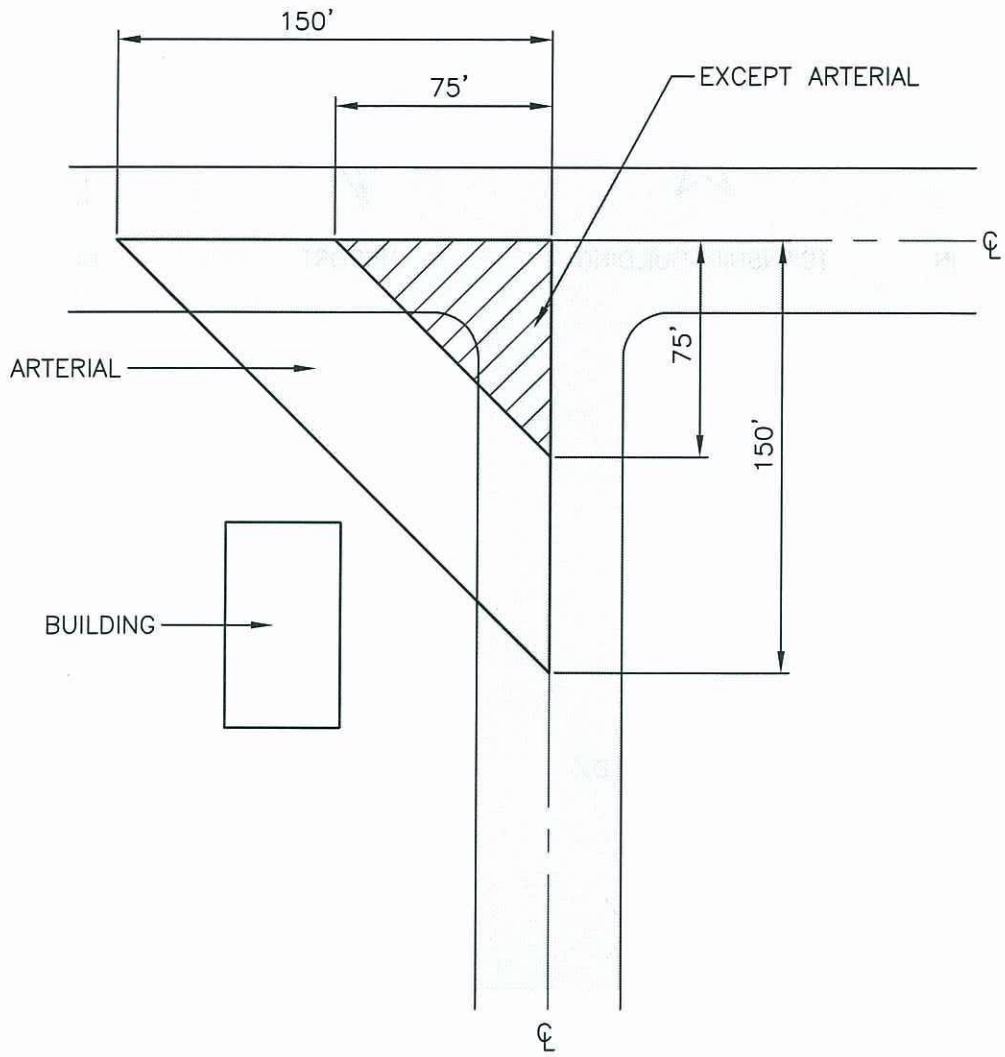


UTILITY LINES  
BURIED

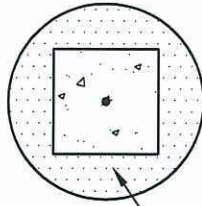


PROPERTY LINE

# NORTH SEWICKLEY TOWNSHIP SITE SYMBOLS STANDARD DETAIL 1



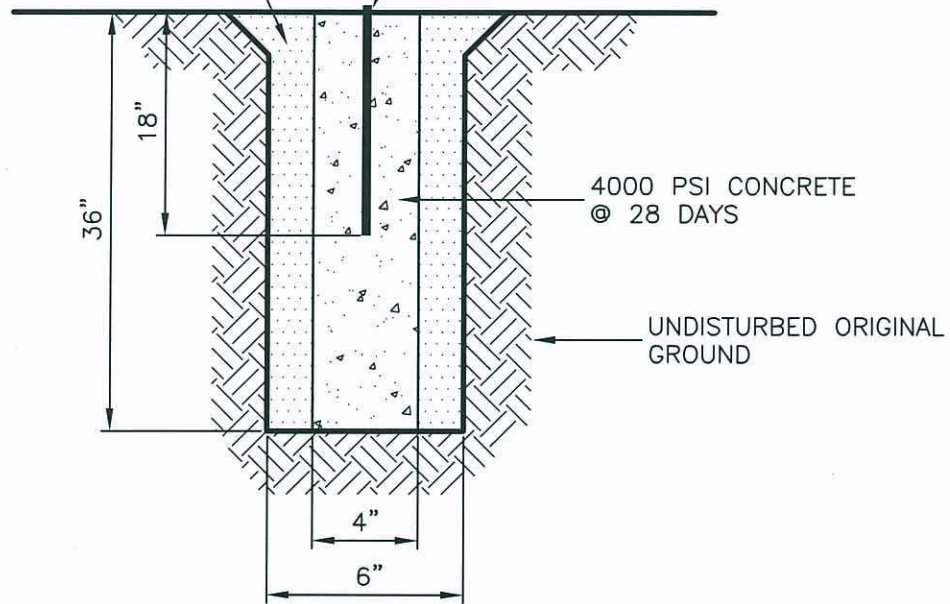
NORTH SEWICKLEY TOWNSHIP  
 CLEAR SITE TRIANGLE  
 STANDARD DETAIL 2



6" DIA. AUGERED DRILLED HOLE,  
BACKFILLED WITH DRY MORTAR  
OR CAST-IN-PLACE CONCRETE

BACKFILL WITH DRY  
MORTAR IF PRECAST  
MONUMENT IS USED

#4 - 18" LONG IRON PINS,  
1/4" PROJECTION



4000 PSI CONCRETE  
@ 28 DAYS

UNDISTURBED ORIGINAL  
GROUND

NOTE:

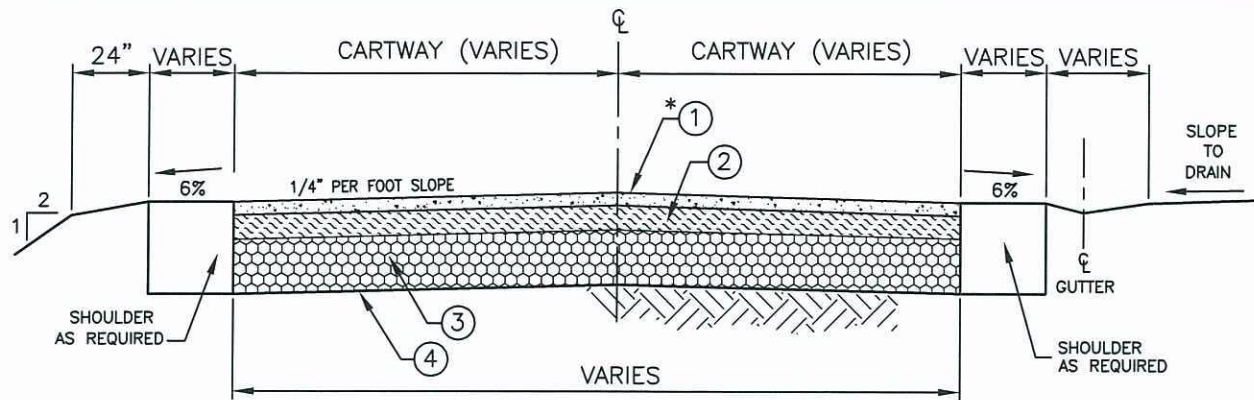
LOCATE MONUMENT PER RECORDED PLAN (AS APPROVED BY TWP. ENGINEER). 5'-6" OFF  
P/L WITHIN PUBLIC DEDICATED R.O.W., INSTALL AFTER GRADING AND ROADWAY IS COMPLETE.

**NORTH SEWICKLEY TOWNSHIP  
CONCRETE MONUMENT  
STANDARD DETAIL 3**



**OLSEN & ASSOCIATES, LLC**

PROJECT NO. 200655A



NO.	TYPE	COURSE	AADT (ANNUAL AVG. DAILY TRAFFIC)			
			1-600	601-1300	1301-2400	2401-4500
* ①	SURFACE	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, 0.0 TO 0.3 MILLION ESAL'S, 9.5 MM MIX, SRL L, 1.5" DEPTH	1.5"	1.5"	1.5"	1.5"
②	SURFACE	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDER MIX COURSE, PG 64-22, 0.0 TO 0.3 MILLION ESAL'S, 19.0 MM MIX, 2.0" DEPTH	2"	2"	2"	2"
③	BASE	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BASE COURSE, PG 64-22, 0.0 TO 0.3 MILLION ESAL'S, 25.0 MM MIX, DEPTH TO MATCH ADT CHART	3"	5"	6"	6"
④	SUBBASE	SUBBASE REMAINS AS IS ON CHART	8"	6"	6"	6"

\* APPLIED WITHIN 2 YEARS AFTER INITIAL PAVING, AND WITH TACKLOAD APPLIED.

#### NOTES:

MATERIALS AND CONSTRUCTION IN ACCORDANCE WITH PA. D.O.T. FORM 408 (LATEST REVISION)

IF NECESSARY ALL UNEVEN AREAS, SETTLED AREAS, AREAS DAMAGED BY UTILITY COMPANIES AND OTHER BROKEN OR UNEVEN AREAS SHALL BE REPAIRED THEN LEVELED WITH ID-2 BITUMINOUS PRIOR TO PAVING.

PAVEMENT WIDTH IN ACCORDANCE WITH THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

DETAIL AND TABLE DOES NOT APPLY TO PRIVATE STREETS.

SHOULDERS TO BE PA. D.O.T. RC-25-TYPE 3. WITH DEPTH OF SHOULDER THE COMBINED DEPTH OF SURFACE AND BASE COURSES.

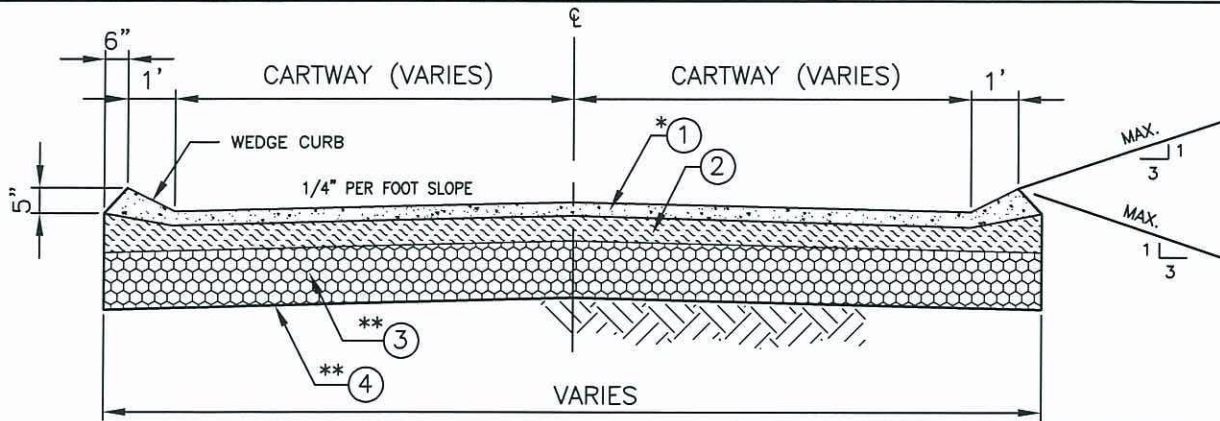
THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE PROPER MATERIAL IS PROVIDED BY SUPPLYING A COPY OF AN APPROVED PADOT BITUMINOUS ASPHALT MIX DESIGN A MINIMUM OF 5 WORKING DAYS PRIOR TO THE START OF THE WORK OR AT THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR WILL ALSO SUPPLY THE MUNICIPALITY WITH A DAILY BITUMINOUS MATERIAL CERTIFICATION ON A TR-465 OR CS-4171 WITHIN 24 HOURS OF PLACING THE BITUMINOUS MATERIAL FOR EACH DAY'S PLACEMENT.

## NORTH SEWICKLEY TOWNSHIP ROAD SECTION WITHOUT CURBING STANDARD DETAIL 4



**OLSEN & ASSOCIATES, LLC**

PROJECT NO. 200655A



NO.	TYPE	COURSE	AADT (ANNUAL AVG. DAILY TRAFFIC)			
			1-600	601-1300	1301-2400	2401-4500
* ①	SURFACE	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, 0.0 TO 0.3 MILLION ESAL'S, 9.5 MM MIX, SRL L, 1.5" DEPTH	1.5"	1.5"	1.5"	1.5"
②	SURFACE	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDER MIX COURSE, PG 64-22, 0.0 TO 0.3 MILLION ESAL'S, 19.0 MM MIX, 2.0" DEPTH	2"	2"	2"	2"
** ③	BASE	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BASE COURSE, PG 64-22, 0.0 TO 0.3 MILLION ESAL'S, 25.0 MM MIX, DEPTH TO MATCH ADDT CHART	3"	5"	6"	6"
** ④	SUBBASE	SUBBASE REMAINS AS IS ON CHART	8"	6"	6"	6"

\* APPLIED WITHIN 2 YEARS AFTER INITIAL PAVING, AND WITH TACKLOAD APPLIED.

\*\* THE SUBBASE AND THE BASE SHALL BE AT LEAST 12" WIDER THAN THE WEARING COURSES.

### NOTES:

MATERIALS AND CONSTRUCTION IN ACCORDANCE WITH PA. D.O.T. FORM 408 (LATEST REVISION)

IF NECESSARY ALL UNEVEN AREAS, SETTLED AREAS, AREAS DAMAGED BY UTILITY COMPANIES AND OTHER BROKEN OR UNEVEN AREAS SHALL BE REPAIRED THEN LEVELED WITH ID-2 BITUMINOUS PRIOR TO PAVING.

PAVEMENT WIDTH IN ACCORDANCE WITH THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

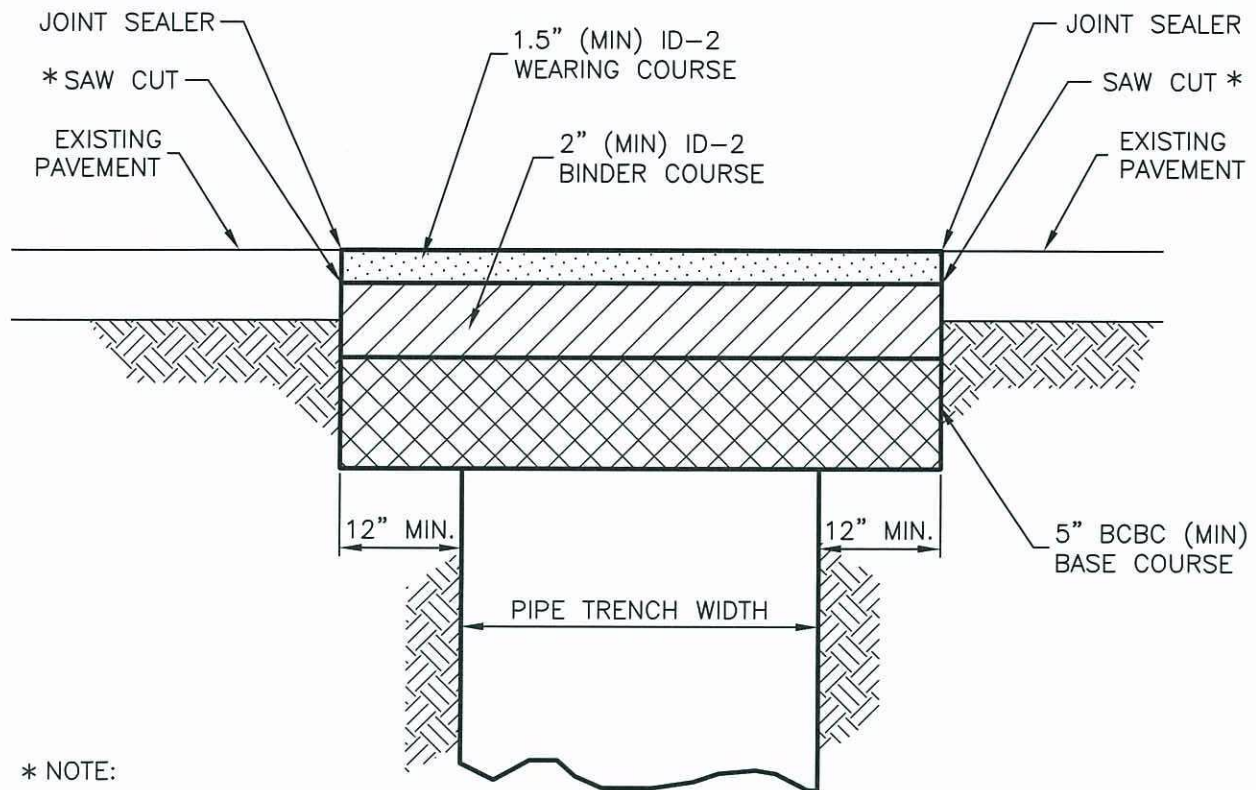
DETAIL AND TABLE DOES NOT APPLY TO PRIVATE STREETS.

SHOULDERS TO BE PA. D.O.T. RC-25-TYPE 3. WITH DEPTH OF SHOULDER THE COMBINED DEPTH OF SURFACE AND BASE COURSES.

THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE PROPER MATERIAL IS PROVIDED BY SUPPLYING A COPY OF AN APPROVED PADOT BITUMINOUS ASPHALT MIX DESIGN A MINIMUM OF 5 WORKING DAYS PRIOR TO THE START OF THE WORK OR AT THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR WILL ALSO SUPPLY THE MUNICIPALITY WITH A DAILY BITUMINOUS MATERIAL CERTIFICATION ON A TR-465 OR CS-4171 WITHIN 24 HOURS OF PLACING THE BITUMINOUS MATERIAL FOR EACH DAY'S PLACEMENT.


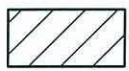
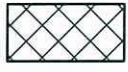
SHOULDERS TO BE EARTHEN, UNLESS OTHERWISE DIRECTED BY TOWNSHIP ENGINEER.

## NORTH SEWICKLEY TOWNSHIP ROAD SECTION WITH CURBING STANDARD DETAIL 5



\* NOTE:

- 2 SEPARATE SAW CUTS:
- 1 CUT BEFORE CONSTRUCTION
- 1 CUT BEFORE FINAL PAVING

-  1.5" (MIN) ID-2 WEARING COURSE
-  2" (MIN) ID-2 BINDER COURSE
-  5" (MIN) BCBC BASE COURSE

NOTE:

- 1. DURING COLD WEATHER MONTHS PROVIDE AND MAINTAIN A TEMPORARY BITUMINOUS COLD PATCH SURFACE UNTIL WEATHER PERMITS HOT ASPHALT PAVING
- 2. THE BOROUGH MUST BE NOTIFIED 24 HOURS IN ADVANCE OF ROAD OPENING AND SURFACING

BCBC BASE COURSE SHALL BE AS THICK AS EXISTING OR 5" MINIMUM, (AFTER COMPACTION) WHICH EVER IS GREATER

BINDER COURSE SHALL BE AS THICK AS EXISTING OR 2" MINIMUM, (AFTER COMPACTION) WHICH EVER IS GREATER

WEARING COURSE SHALL BE AS THICK AS EXISTING OR 1.5" MINIMUM, (AFTER COMPACTION) WHICH EVER IS GREATER

## NORTH SEWICKLEY TOWNSHIP ASPHALT PAVEMENT REPLACEMENT STANDARD DETAIL 6

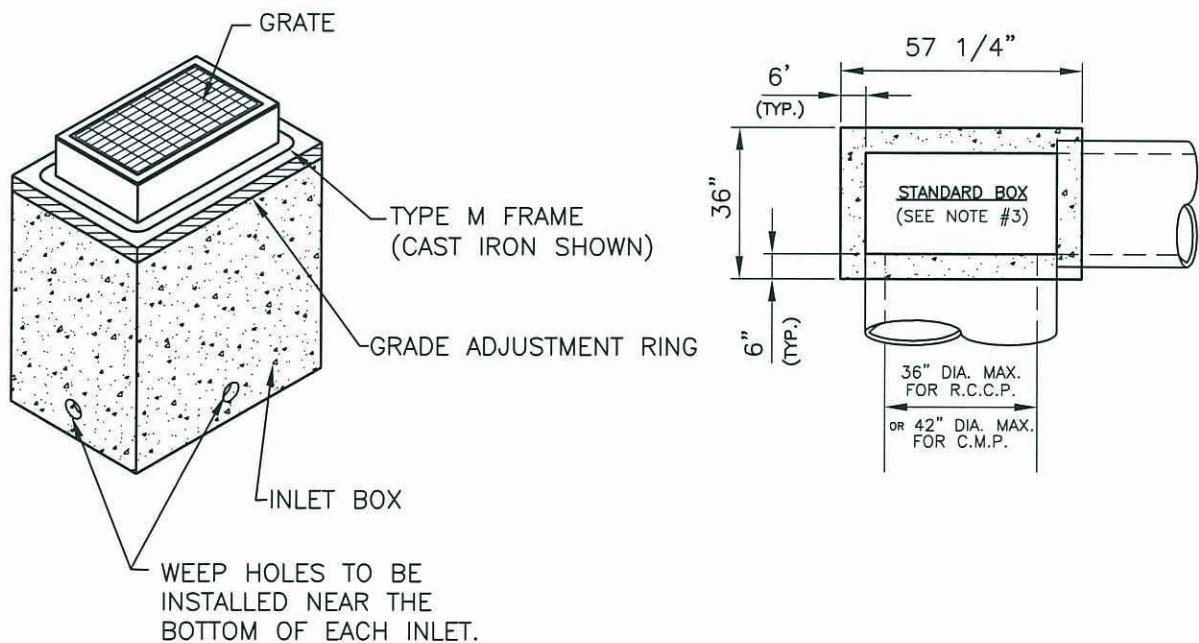


**OLSEN & ASSOCIATES, LLC**

PROJECT NO. 200655A

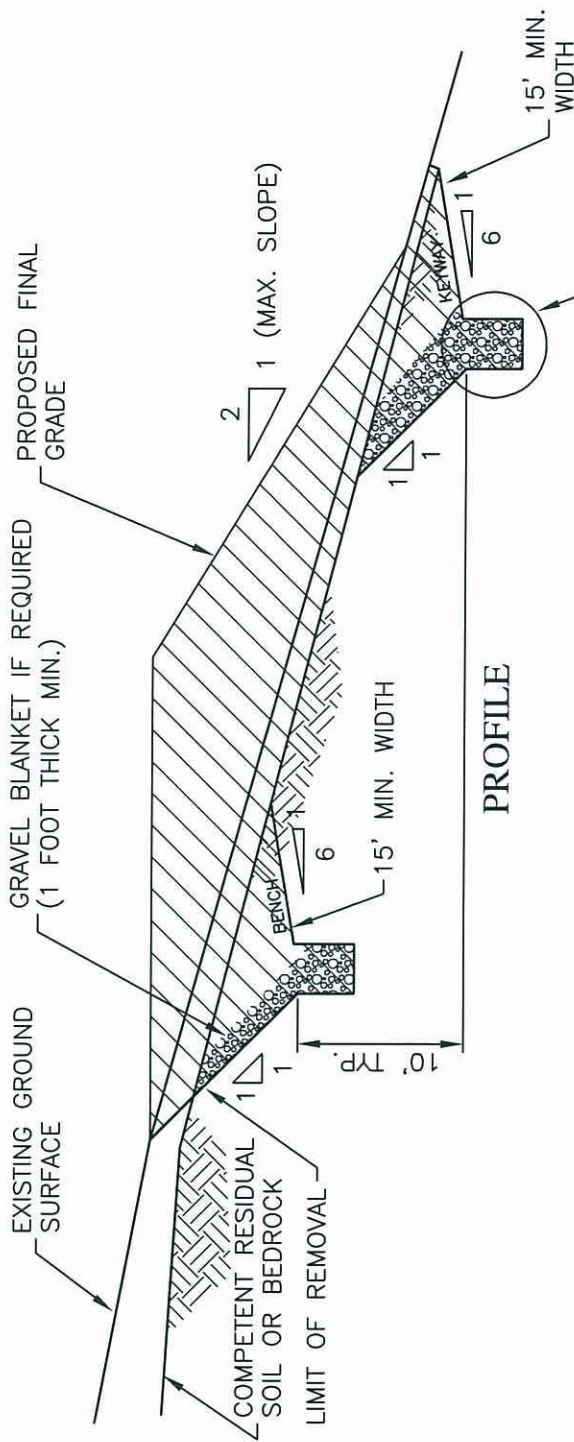
NOTES:

- 1) CONSTRUCT INLET BOXES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 713.2(d), FOR PRECAST CEMENT CONCRETE UNITS
- 2) ONLY PRECAST INLET BOXES SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15 SHALL BE PERMITTED.
- 3) PROVIDE STANDARD INLET BOXES AND COVER ADJUSTMENT SLABS WITH A 24" X 45 1/4" OPENING TO ACCOMMODATE STANDARD TOP COMPONENTS.
- 4) INLETS THAT EXCEED THE MAXIMUM HEIGHT SHOWN SHALL REQUIRE A SPECIAL DETAIL AND DESIGN FOR THE INLET WALLS AND BASE. CONSTRUCT INLETS THAT EXCEED 5 FEET IN HEIGHT WITH STEPS SIMILAR TO MANHOLES.
- 5) LOCATE PIPE OR PIPES, AS INDICATED, WITH THE INLET BOTTOM SHAPED TO CHANNEL THE FLOW TOWARD THE OUTLET PIPE.
- 6) PLACE SUBBASE MATERIAL MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTION 350.2, IN 4 INCH LAYERS, COMPACTED TO A DENSITY SATISFACTORY TO THE ENGINEER AND INCIDENTAL TO THE INLET PAY ITEM.
- 7) FOR PIPE DIAMETERS LARGER THAN 36" IN THIS WALL FOR A TYPE 1, USE A MODIFIED TYPE I INLET BOX.
- 8) FOR PIPE DIAMETERS LARGER THAN 48" R.C.C.P. OR 54" C.M.P. IN THIS WALL FOR A TYPE 2, USE A MODIFIED TYPE II INLET BOX.
- 9) FOR PIPE DIAMETERS LARGER THAN 48" R.C.C.P. OR 54" C.M.P. IN THE LONG DIRECTION OR LARGER THAN 36" IN THE SHORT DIRECTION, A SPECIAL DETAIL AND DESIGN IS REQUIRED.



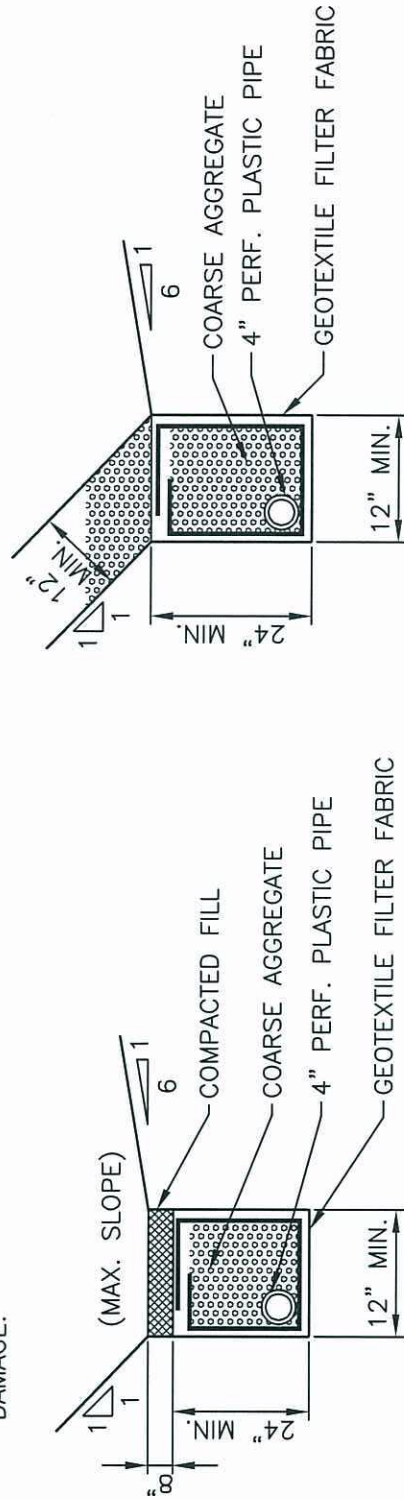
NORTH SEWICKLEY TOWNSHIP  
TYPE M INLET  
STANDARD DETAIL 7





**PROFILE**

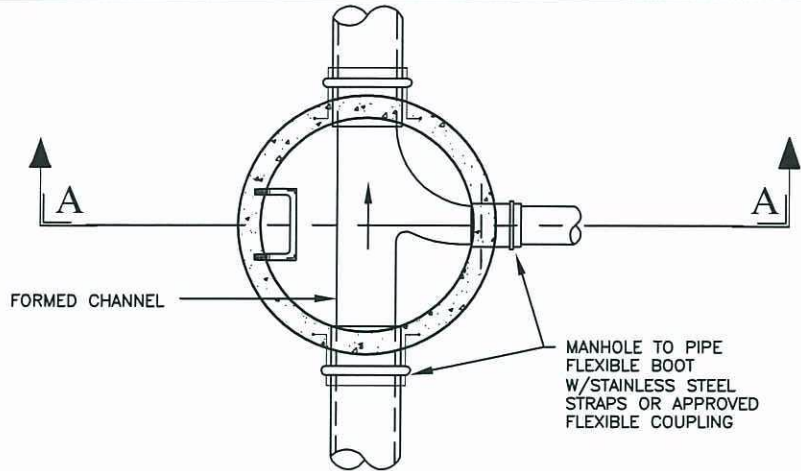
1. GRAVEL BLANKET TO BE INSTALLED AS DIRECTED BY DEVELOPER'S GEOTECHNICAL CONSULTANT.
2. 4" PERF. PLASTIC PIPE TO DRAIN TO OUTSLOPE AND THE WATER DIVERTED OR COLLECTED IF NECESSARY TO PREVENT DOWNSTREAM DAMAGE.



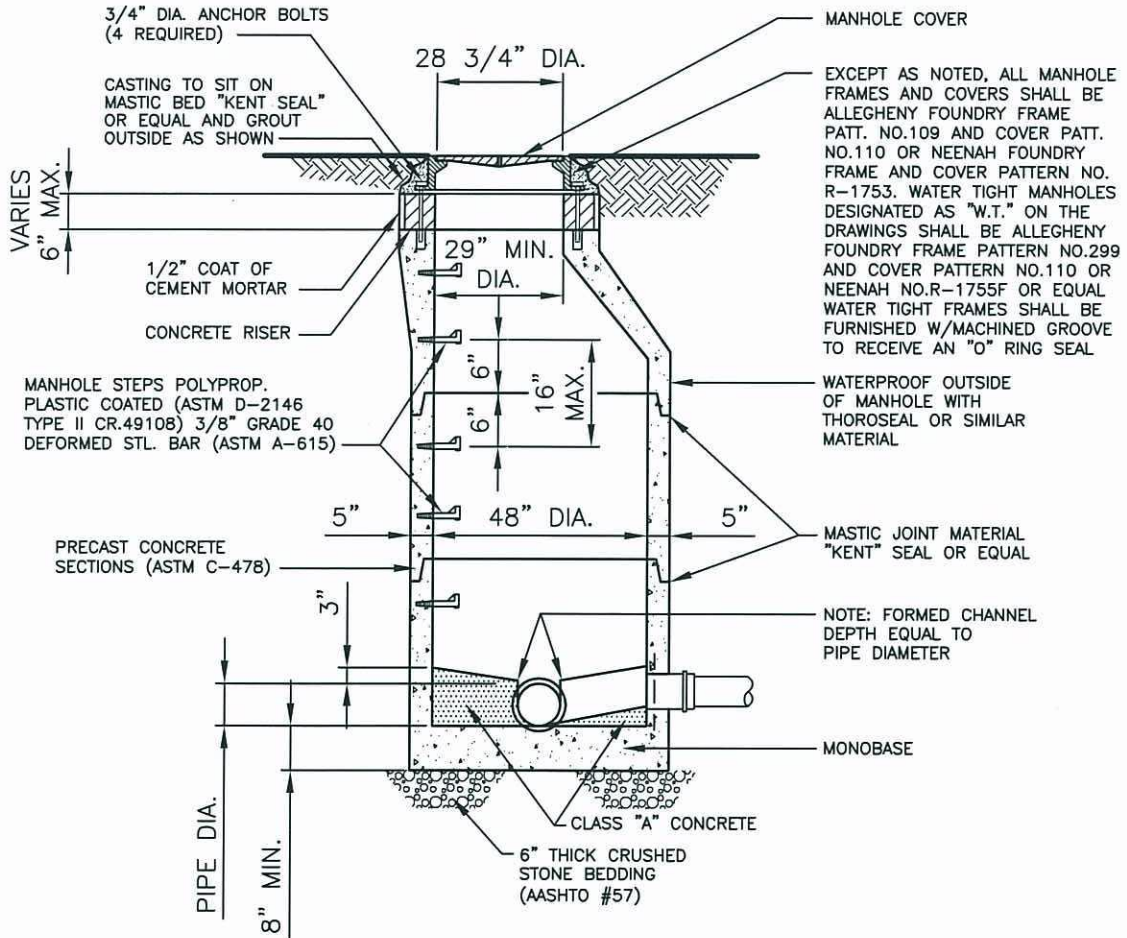
(IF GRAVEL BLANKET IS NOT REQUIRED)

(IF GRAVEL BLANKET IS REQUIRED)

**NORTH SEWICKLEY TOWNSHIP  
FILL BENCH DETAIL  
STANDARD DETAIL 8**

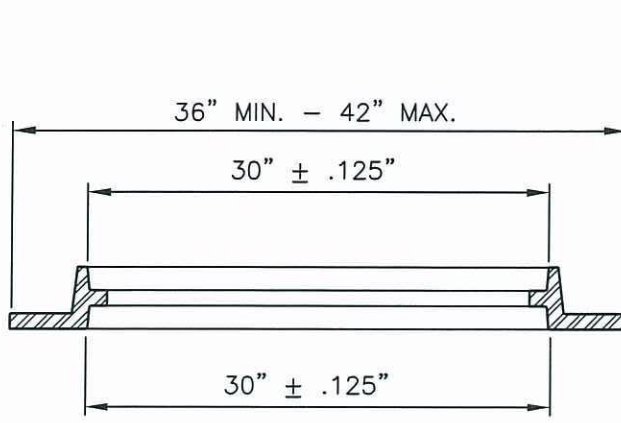


**SECTIONAL PLAN**

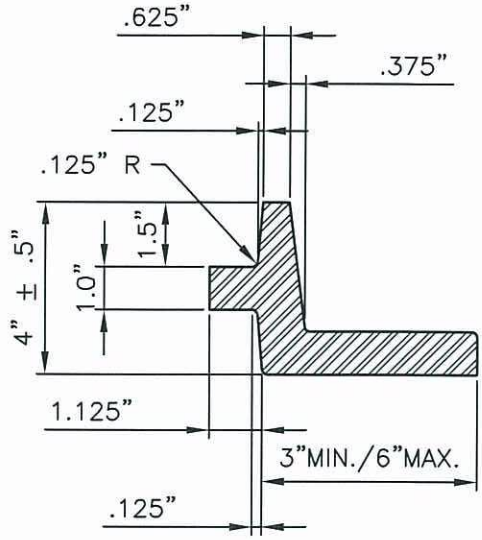


**SECTION A-A**  
**48" DIA. CONCRETE MANHOLE DETAIL**  
 (FOR SEWERS THRU 24" DIA.)

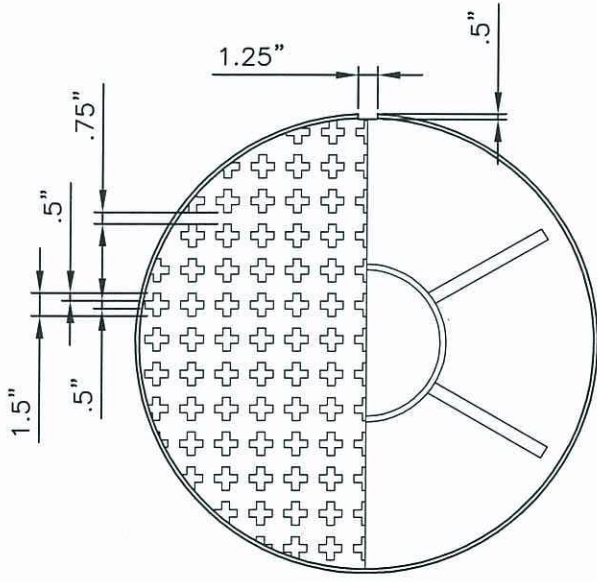
**NORTH SEWICKLEY TOWNSHIP**  
**PRECAST CONCRETE MANHOLE**  
**STANDARD DETAIL 9**



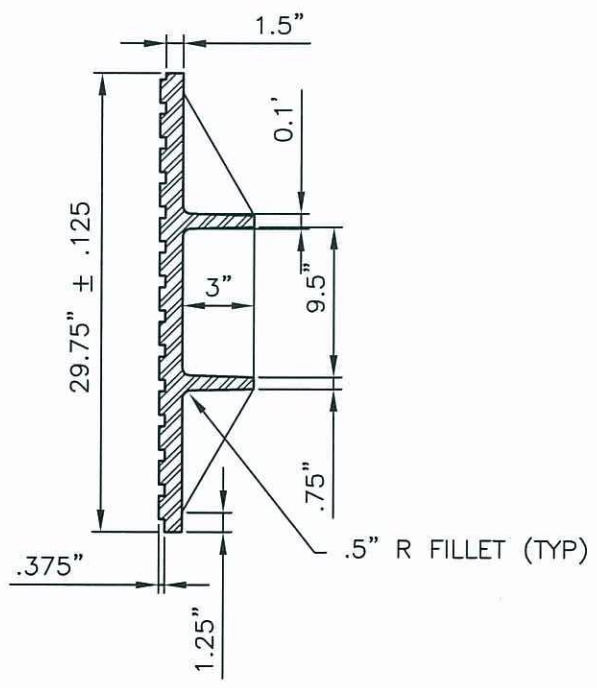
CAST IRON FRAME



NOTE:  
 (ALL ROUNDS AND FILLETS TO BE .25\"/>

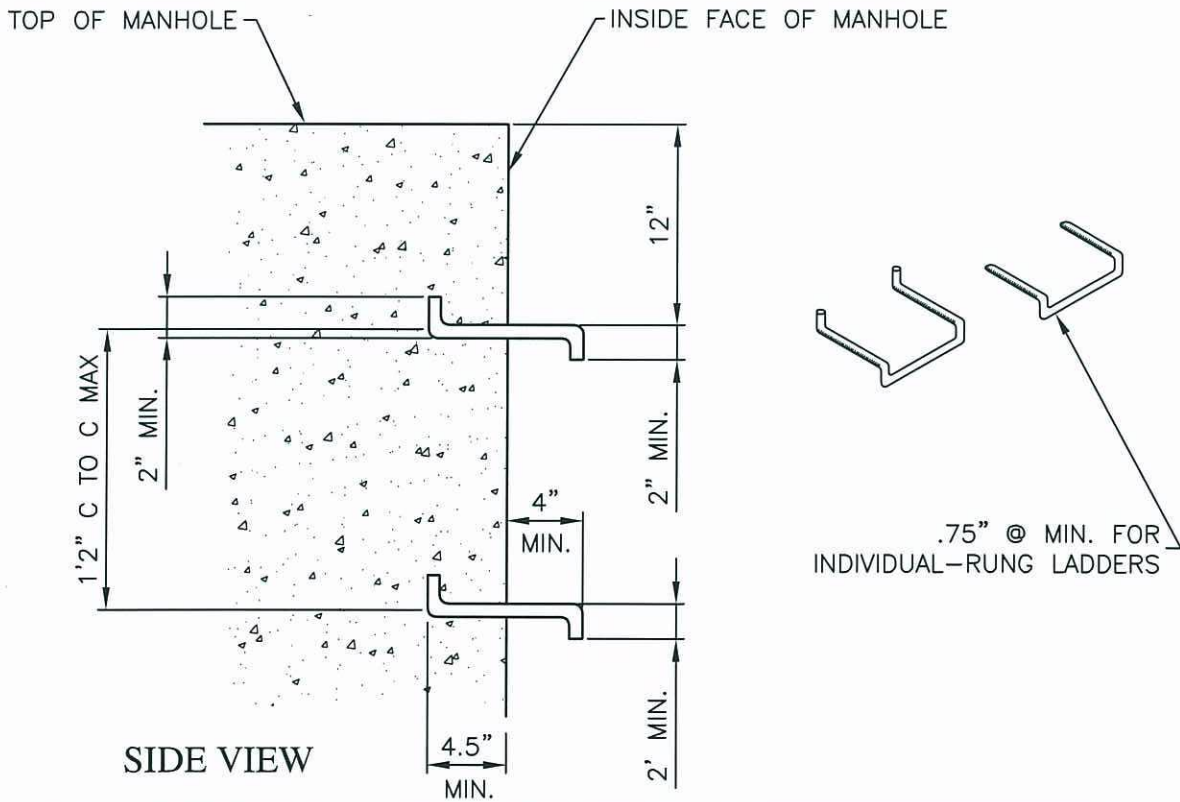
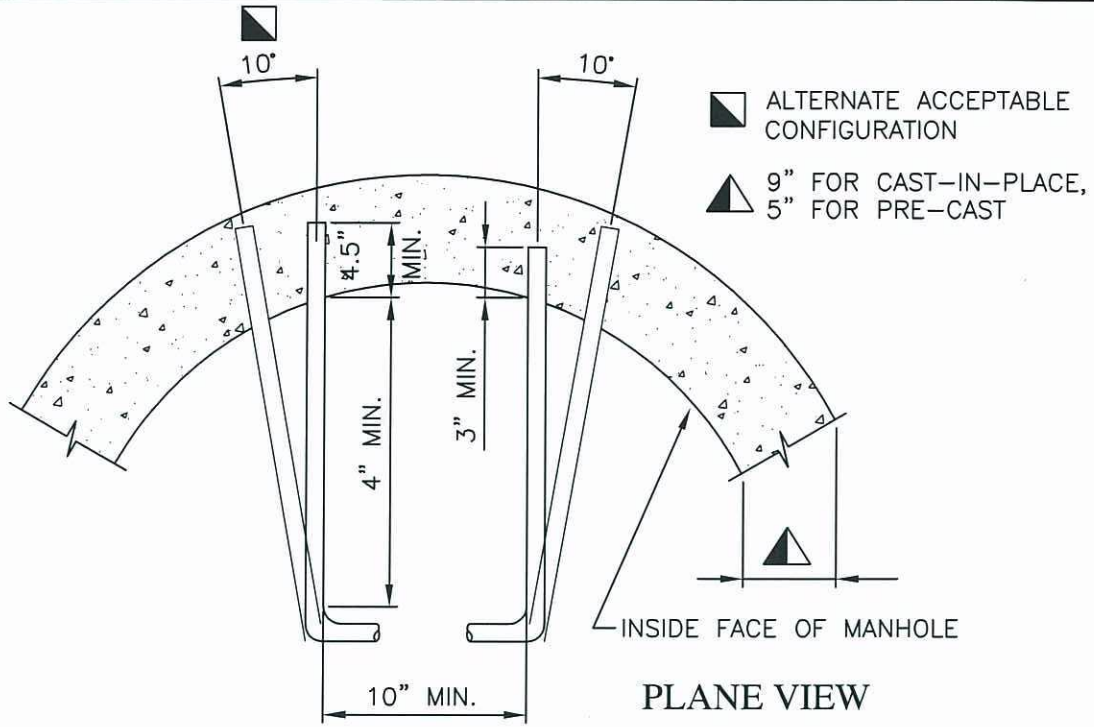


CAST IRON COVER

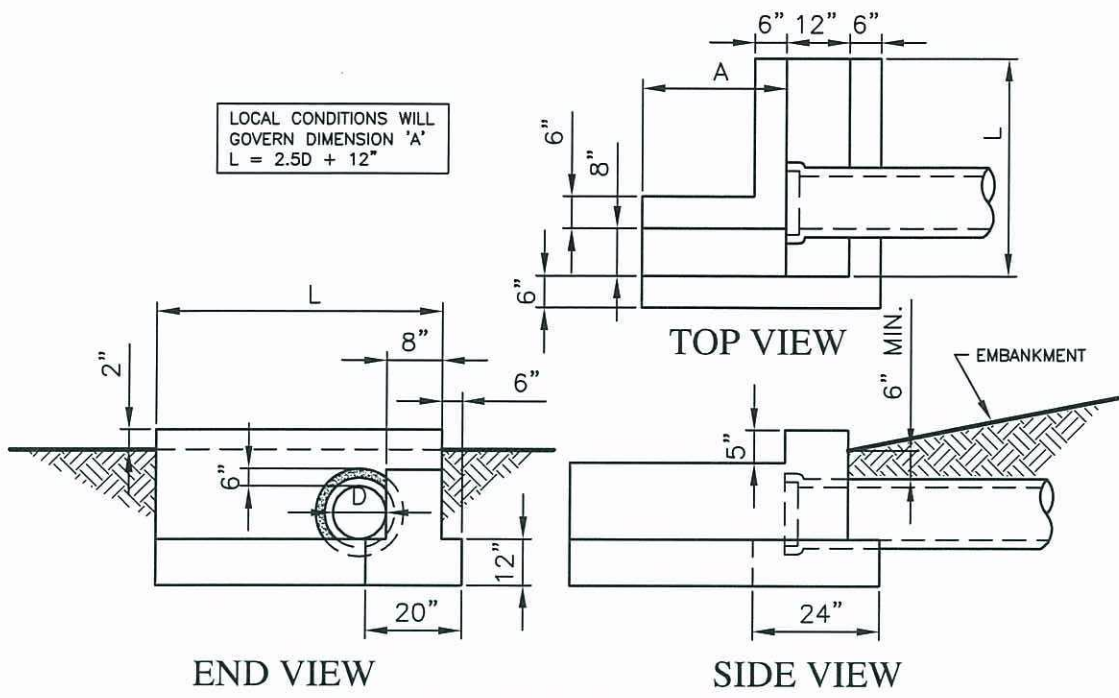


MANHOLE COVER

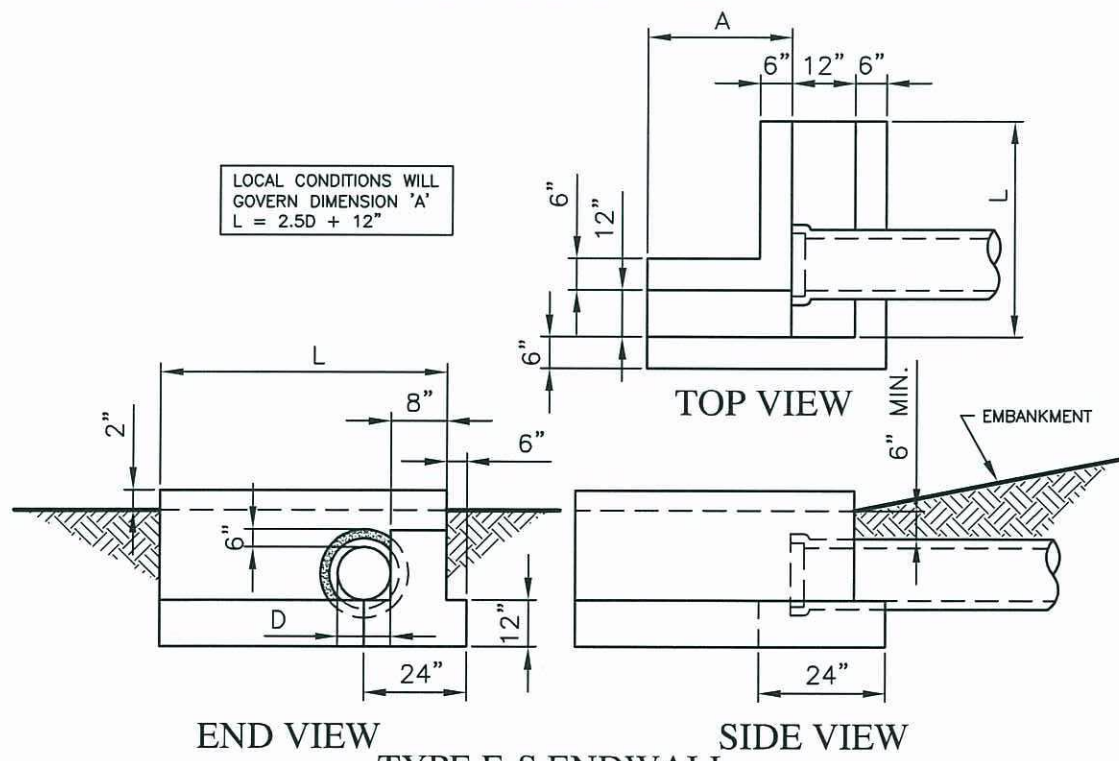
NORTH SEWICKLEY TOWNSHIP  
 MANHOLE COVER  
 STANDARD DETAIL 10



NORTH SEWICKLEY TOWNSHIP  
 MANHOLE LADDER BARS  
 STANDARD DETAIL 11

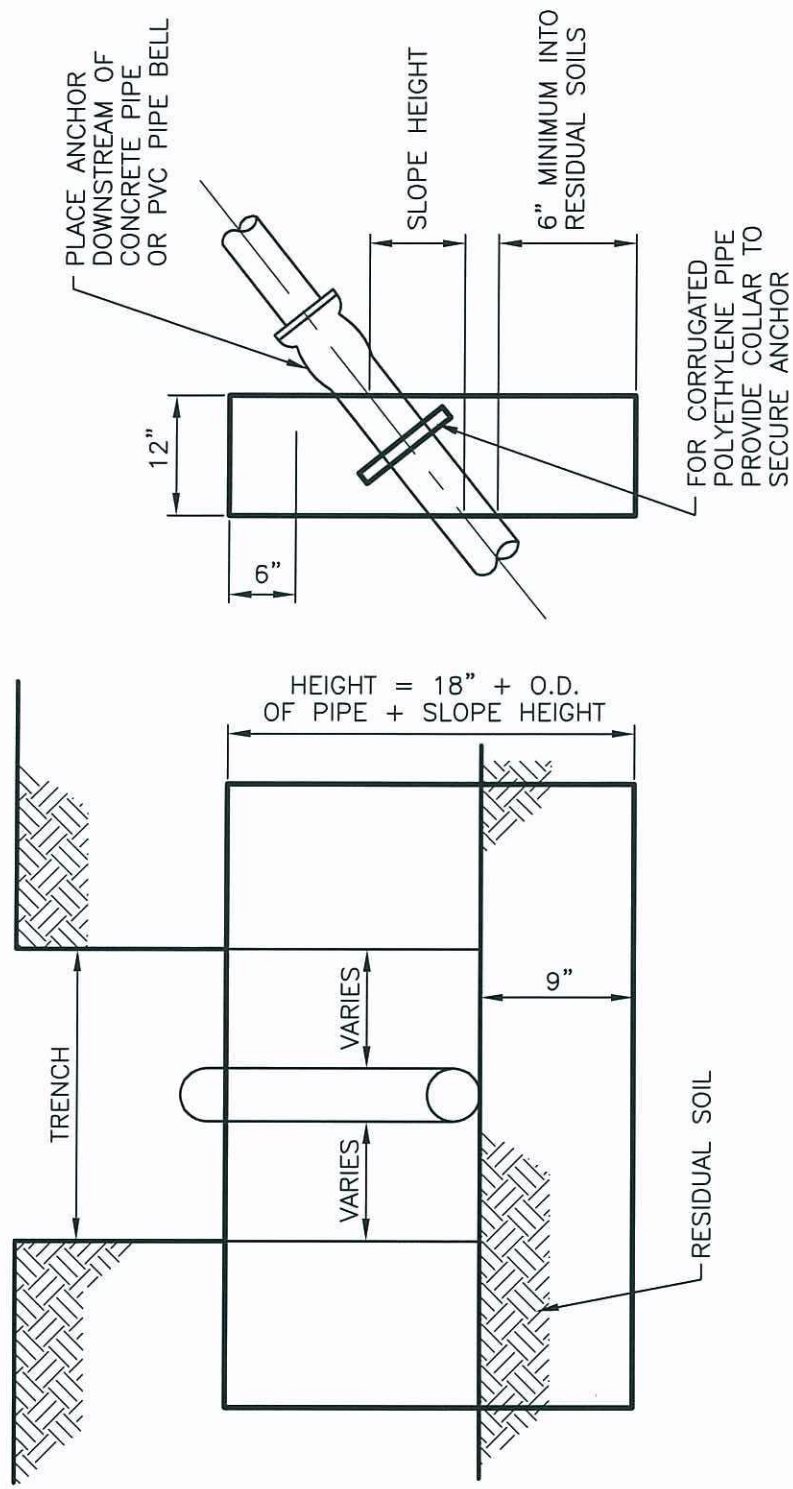


**TYPE D-E ENDWALL**



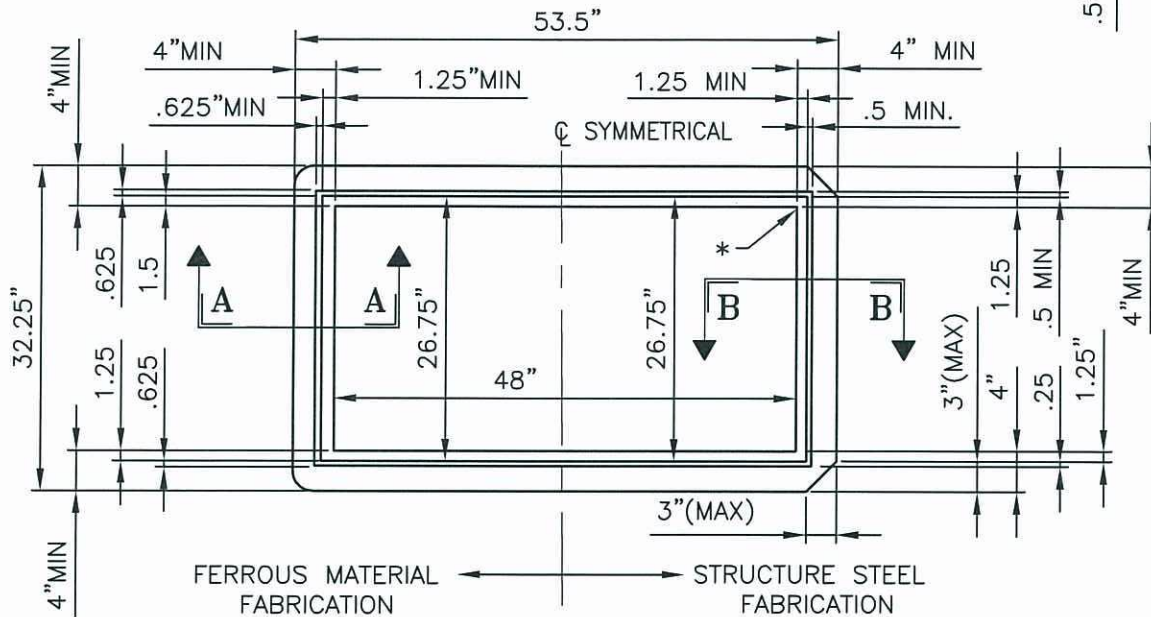
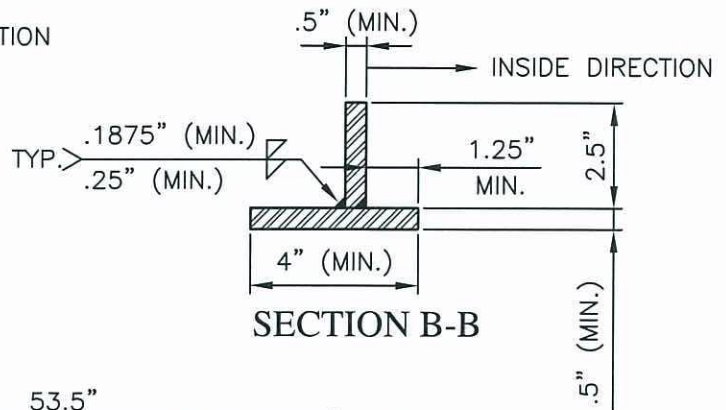
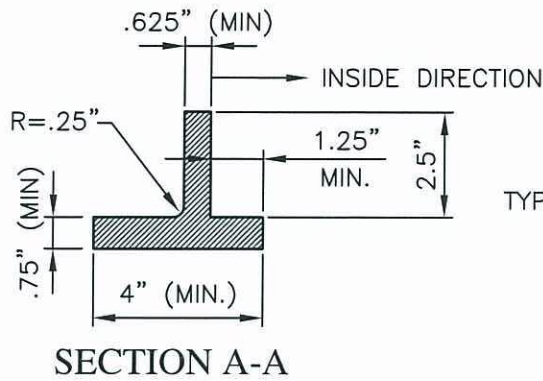
**TYPE E-S ENDWALL**

**NORTH SEWICKLEY TOWNSHIP  
 HEADWALLS AND ENDWALLS  
 STANDARD DETAIL 12**



SPACING REQUIRED	
% GRADE	DISTANCE CENTER TO CENTER
20% TO 30%	36' C.C.
30% TO 50%	24' C.C.
50% +	18' C.C.

**NORTH SEWICKLEY TOWNSHIP**  
**PIPE ANCHOR**  
**STANDARD DETAIL 13**

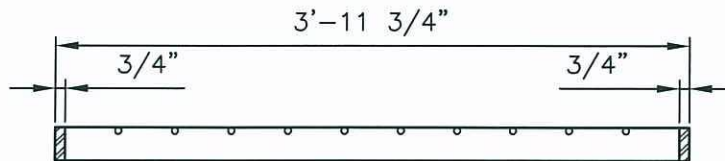


\* CORNER CONFIGURATION DETAILS ARE FABRICATOR'S RESPONSIBILITY AND SHALL BE APPROVED.

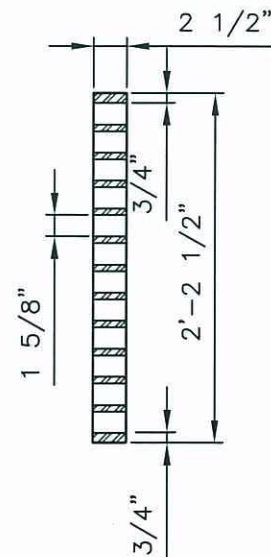
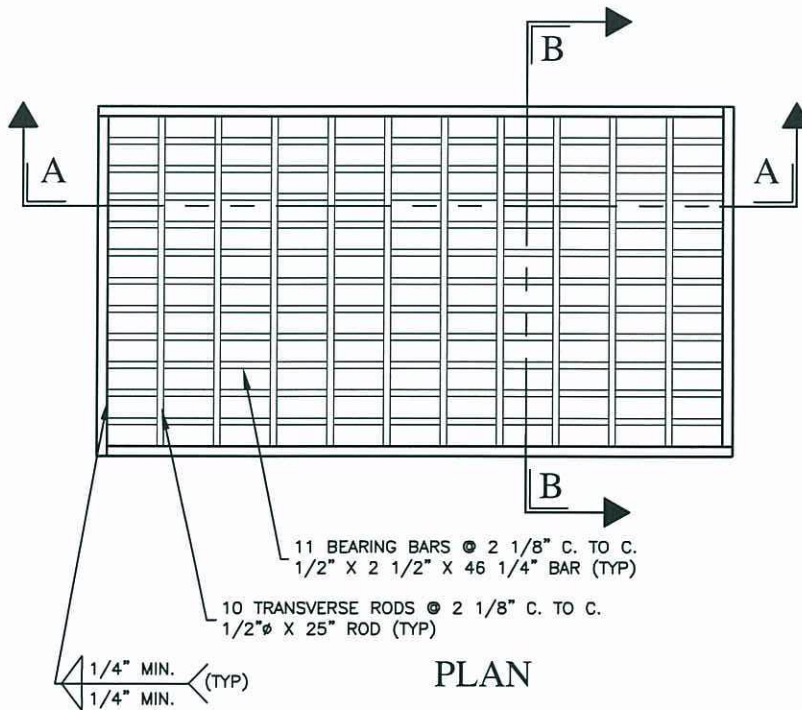
**NORTH SEWICKLEY TOWNSHIP  
TYPE M INLET FRAME  
STANDARD DETAIL 14**

NOTES:

1. THIS SHEET DEPICTS THE DIMENSIONS REQUIRED FOR UNIFORMITY AND INTERCHANGEABILITY. IT DOES NOT INCLUDE DETAILS REQUIRED FOR FABRICATION OR MANUFACTURING. ONLY GRATES SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15 SHALL BE PERMITTED. FOR A BULLETIN 15 LISTING, SUBMIT A 22" x 36" REPRODUCIBLE SHOP DRAWING TO THE BUREAU OF CONSTRUCTION AND MATERIALS, MATERIALS AND TESTING DIVISION FOR REVIEW AND APPROVAL.
2. WELD STRUCTURAL STEEL GRATES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408 SECTION 1105.03(R). WELDING SHOPS ARE NOT REQUIRED TO BE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) CERTIFIED.
3. PROVIDE TRANSVERSE RODS, MEETING THE REQUIREMENTS OF AASHTO-M227 OR M255 , GRADE 70 , 75 OR 80 , FLUSH WITH THE GRATE SURFACE.
4. PROVIDE BICYCLE-SAFE, STRUCTURAL STEEL OR CAST IRON VANE GRATES FOR INSTALLATION ONLY WHERE BICYCLE TRAFFIC IS ANTICIPATED SUCH AS CURBED ROADWAYS IN URBAN AREAS OR ROADWAYS SPECIFICALLY ESTABLISHED AND SIGNED AS BIKEWAYS OR HAVING BIKE LANES. ALTERNATE BICYCLE-SAFE GRATE DESIGNS SHALL REQUIRE A SHOP DRAWING SUBMISSION, AS SPECIFIED IN NOTE 1, AND SHALL CONFORM TO THE DIMENSIONAL REQUIREMENTS FOR PROPER INSTALLATION WITH THE CURRENT CONCRETE TOP UNITS.
5. FABRICATE SLOTS BY BURNING, DRILLING , SHEARING OR PUNCHING. HAVE THE BOTTOM OF ALL BURNED OR DRILLED SLOTS CONFORM TO THE SHAPE OF THE ROD.
6. INSTALL STRUCTURAL STEEL GRATES WITH THE GRATE SPACERS LOCATED FLUSH ALONG THE TOP SURFACE OF THE GRATE.



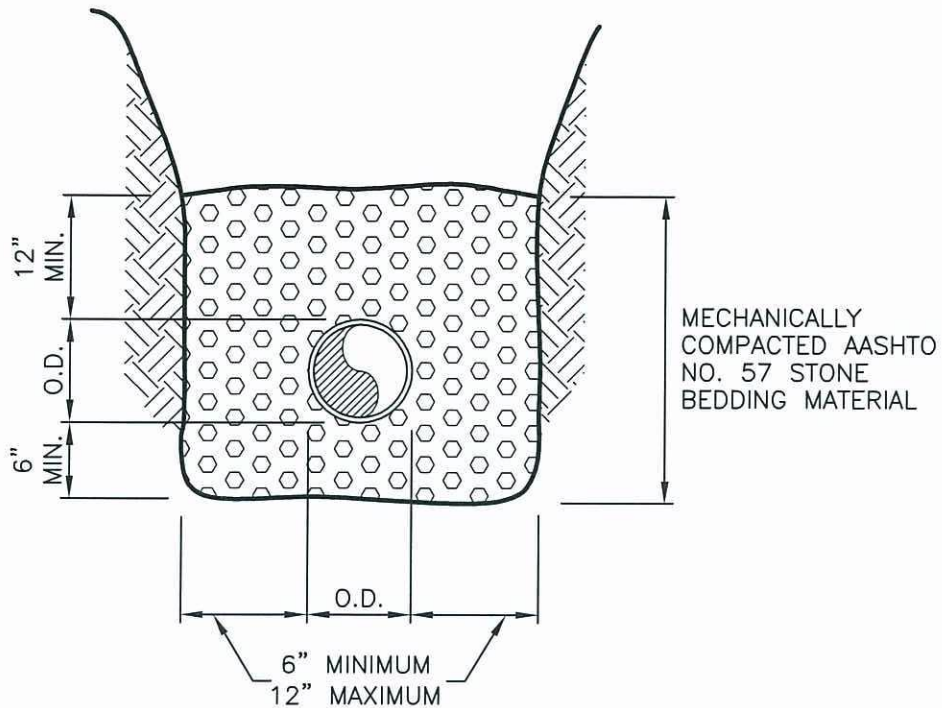
SECTION A-A



SECTION B-B

**NORTH SEWICKLEY TOWNSHIP  
STRUCTURAL STEEL GRATE BICYCLE SAFE  
STANDARD DETAIL 15**





**TYPICAL BEDDING AND PIPE ZONE  
POLYETHYLENE PIPE**

**POLYETHYLENE PIPE SPECIFICATIONS**

PIPE AND FITTINGS SHALL BE MADE OF POLYETHYLENE COMPOUNDS WHICH MEET OR EXCEED THE REQUIREMENTS OF TYPE III, CATEGORY 4 OR 5, GRADE P33 OR P34, CLASS C PER ASTM D-1248 WITH THE APPLICABLE REQUIREMENTS DEFINED IN ASTM D-1248.

MIN. COVER IS TO BE 2 FT. WITH AASHTO NO. 57 STONE A MIN. OF 12" ABOVE THE TOP OF PIPE. IF THE PIPE IS TO BE LAID UNDER DRIVEWAYS OR PARKING AREAS WITH MINIMUM COVER, THE 2 FEET SHALL BE NO. 57 STONE. MAXIMUM COVER OVER THE PIPE IS NOT TO EXCEED 30 FEET.

MANNING'S 'N' FOR DESIGN SHALL BE 0.012 FOR SMOOTH INTERIOR, AND SHALL BE 0.018 FOR SIZES UP TO AND INCLUDING 15", AND 0.020 FOR SIZES FROM 18" UP TO AND INCLUDING 36" FOR CORRUGATED INTERIOR.

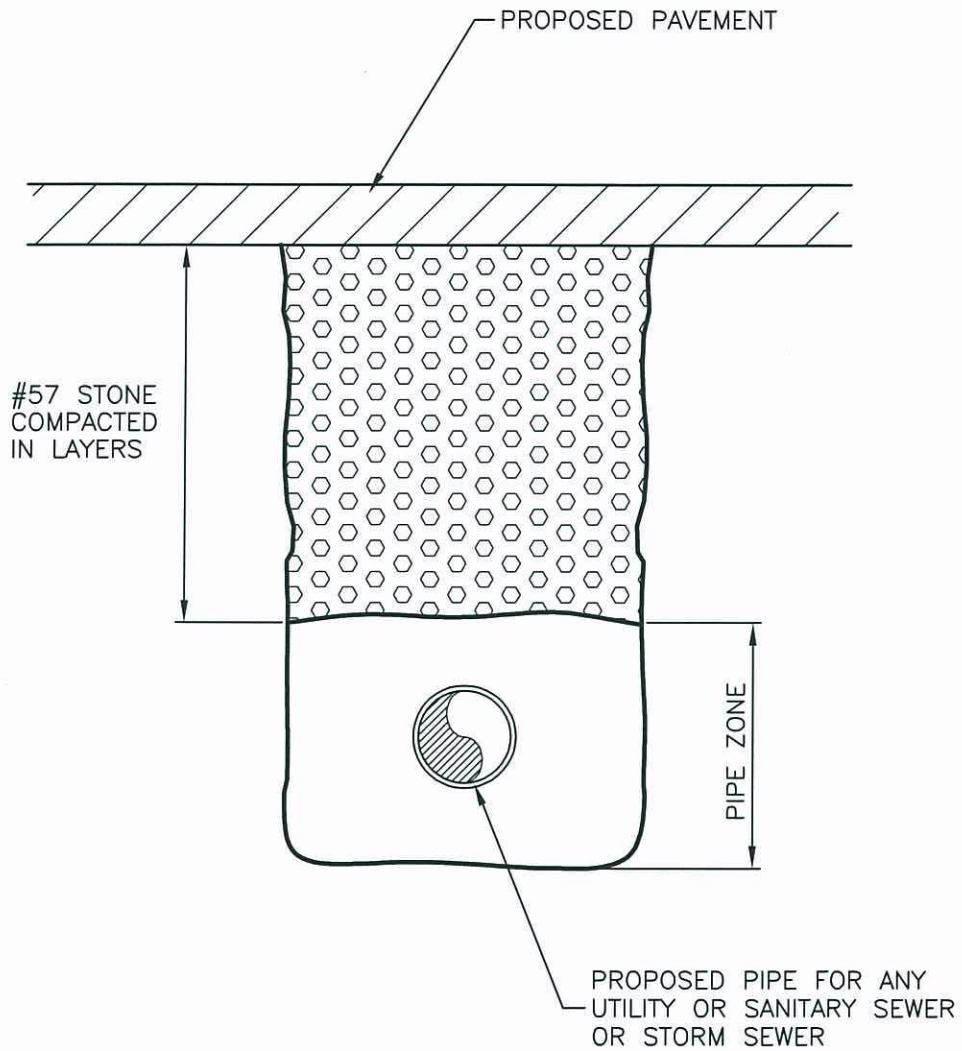
POLYETHYLENE PIPE SHALL BE IN ACCORDANCE WITH PADOT FORM 408, SECTION 601.

**NORTH SEWICKLEY TOWNSHIP  
POLYETHYLENE PIPE SPECIFICATIONS  
STANDARD DETAIL 16**

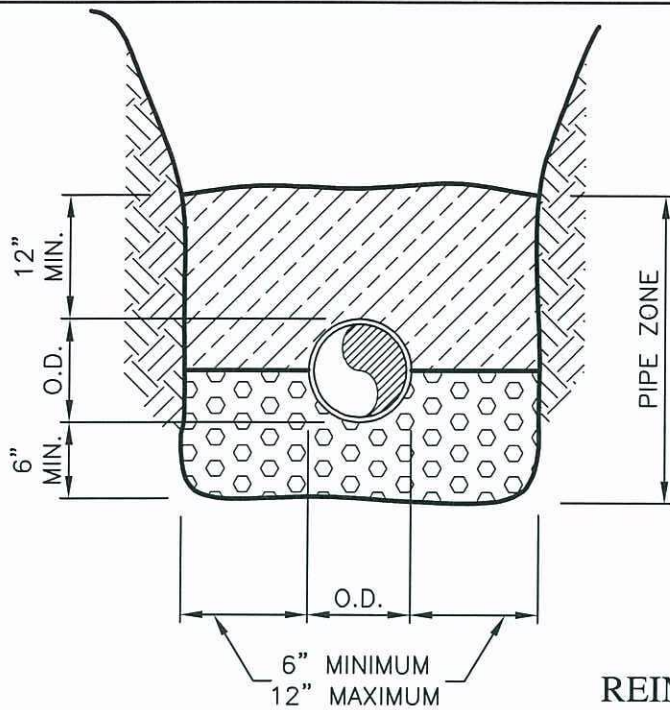


**OLSEN & ASSOCIATES, LLC**

PROJECT NO. 200655A



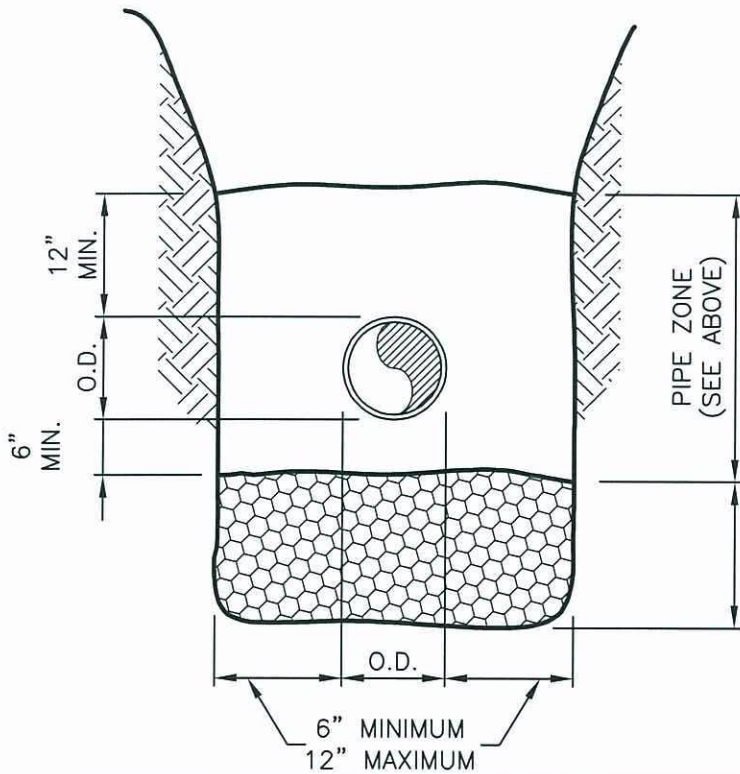
NORTH SEWICKLEY TOWNSHIP  
TRENCH BACKFILL  
STANDARD DETAIL 17



MECHANICALLY COMPACTED  
SELECT BACKFILL MATERIAL  
OR SPECIAL STONE AS  
APPROVED BY THE TOWNSHIP  
ENGINEER

MECHANICALLY COMPACTED  
NO. 57 STONE BEDDING  
MATERIAL

**TYPICAL BEDDING  
AND PIPE ZONE  
REINFORCED CONCRETE PIPE**



NOTE:

SPECIAL BEDDING MAY BE  
REQUIRED BY THE TOWNSHIP  
ENGINEER IF FIELD  
CONDITIONS OR LOADS  
WARRANT THE ADDITIONAL  
BEDDING

O.D. + 24" SPECIAL  
BEDDING AS PER TOWNSHIP  
ENGINEER

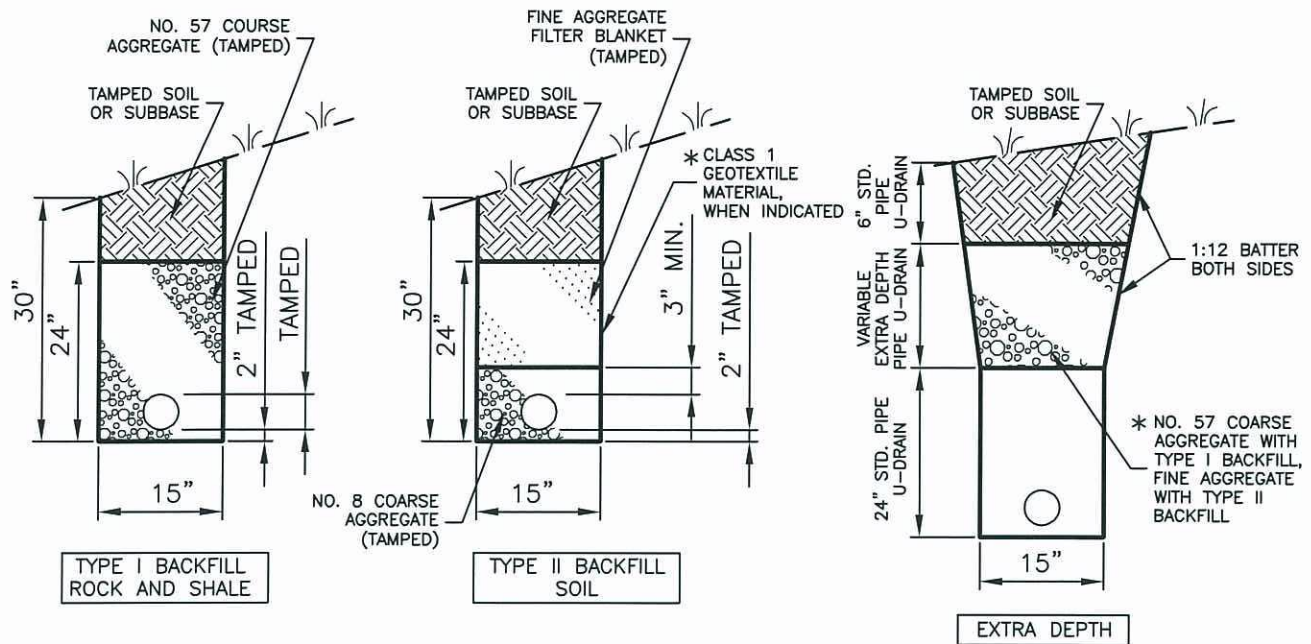
**SPECIAL BEDDING**

**NORTH SEWICKLEY TOWNSHIP  
TYPICAL BEDDING FOR RCP, SPECIAL BEDDING  
STANDARD DETAIL 18**

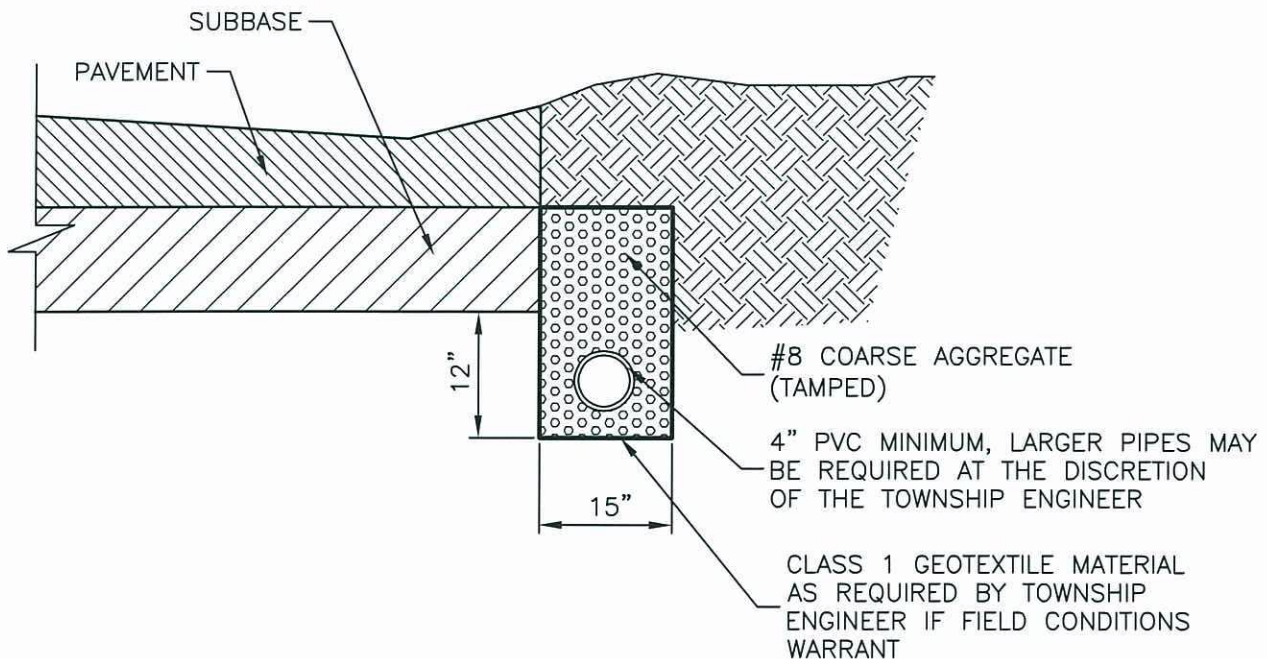


OLSEN & ASSOCIATES, LLC

PROJECT NO. 200655A



\* WHEN GEOTEXTILE MATERIAL IS USED FOR TYPE II BACKFILL, REPLACE FINE AGGREGATE FILTER BLANKET WITH EQUIVALENT DEPTH OF NO. 8 COARSE AGGREGATE.



**NORTH SEWICKLEY TOWNSHIP  
PIPE UNDERDRAIN, PAVEMENT BASE DRAIN  
STANDARD DETAIL 19**