NHT-001	ROADWAY DESIGN CRITERIA
NHT-002	TYPICAL PAVING DETAIL
NHT-003	ALTERNATE PAVING DETAIL
NHT-004	PERMANENT CUL-DE-SAC DETAIL
NHT-005	TEMPORARY CUL-DE-SAC DETAIL
NHT-006	MEDIUM AND DEEP SET CONCRETE CURB DETAILS
NHT-007	CONCRETE CURB AND GUTTER
NHT-008	ASPHALT CURB REPLACEMENT
NHT-009	SIDEWALK DETAILS
NHT-010	TYPICAL CORNER CURB RAMP
NHT-011	TYPICAL UTILITY LOCATION SECTION
NHT-012	TYPE "M" INLET
NHT-013	TYPE "C" INLET
NHT-014	PLACEMENT OF INLETS
NHT-015	TRENCH DRAIN
NHT-016	HDPE SLOPED END SECTION DETAIL
NHT-017	CONCRETE END WALL (PIPE DIAMETERS: 15" TO 30")
NHT-018	CONCRETE END WALL (PIPE DIAMETERS: 36" TO 72")
NHT-019	PIPE TRENCHING AND BEDDING DETAIL
NHT-020	STREET OPENING RESTORATION DETAIL
NHT-021	STREET OPENING RESTORATION DETAIL (CONCRETE BASE)
NHT-022	PRECAST CONCRETE MANHOLE (PIPE DIAMETERS: 6" TO 21")
NHT-023	PRECAST CONCRETE MANHOLE (PIPE DIAMETERS: 24" TO 42")
NHT-024	PRECAST CONCRETE MANHOLE, 72" DIAMETER (PIPE DIAMETERS: 48" TO 54")
NHT-025	ALTERNATE PRECAST CONCRETE MANHOLE (PIPE DIAMETERS: 48" AND LARGER)
NHT-026	PRECAST CONCRETE MANHOLE, CAST-IN-PLACE BOTTOM (PIPE DIAMETERS: 20" TO 33")
NHT-027	PRECAST CONCRETE MANHOLE, CAST-IN-PLACE BOTTOM (PIPE DIAMETERS: 36" TO 42")
NHT-028	POLYPROPYLENE PLASTIC MANHOLE STEP
NHT-029	STORM MANHOLE COVER AND FRAME
NHT-030	COMMERCIAL / INDUSTRIAL CONCRETE CURB AND SIDEWALK DETAIL
NHT-031	COMMERCIAL USE CONCRETE DECK CURB & WEDGE CURB WITH WHEEL STOP
NHT-032	REINFORCED CONCRETE WHEEL STOP
NHT-033	BOLLARD DETAIL
NHT-034	TYPICAL PARKING SPACE DETAILS
NHT-035	TYPICAL ANGLED PARKING SPACE DETAILS
NHT-036	ALLEY PAVING DETAIL
NHT-037	COLLECTOR DRIVEWAY DETAIL
NHT-038	DRIVEWAY SIGHT DISTANCE DIAGRAM
NHT-039	FORMULA SIGHT DISTANCE TABLES
NHT-040	RESIDENTIAL AND MINIMUM USE DRIVEWAY GRADE REQUIREMENTS
NHT-041	(PAGE INTENTIONALLY LEFT BLANK)
NHT-042	(PAGE INTENTIONALLY LEFT BLANK)
NHT-043	SURVEY MONUMENT DETAIL
NHT-044	CONCRETE ANCHORS FOR STORM PIPES

GENERAL NOTES:

1. "AGGREGATE" IS TO BE LIMESTONE OR APPROVED EQUAL.

2. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS, AS AMENDED, OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PENNDOT) PUBLICATION 408 SPECIFICATION, AS WELL AS PENNDOT'S ROADWAY CONSTRUCTION (RC) STANDARDS.

NORTH HUNTINGDON CONNECTED

STANDARD DETAIL INDEX

KU Resources, Inc. Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-INDEX

	TYPE OF STREET			
	ARTERIAL STREETS	COLLECTOR STREETS	LOCAL STREETS	LOCAL ALLEYS
RIGHT OF WAY WIDTHS	60'	60'	50'	20' RESIDENTIAL 30' NON-RESIDENTAL
CUL-DE-SAC RIGHT OF WAY RADIUS	N/A	N/A	53.50'	N/A
ANGLE OF STREET INTERSECTION (MAXIMUM)	75°	75°	75°	75°
CARTWAY PAVING WIDTH (GUTTER TO GUTTER MINIMUM)	30'	30'	24'	16' RESIDENTIAL 20' NON-RESIDENTAL
CUL-DE-SAC PAVING RADIUS TO GUTTER LINE	N/A	N/A	40'	40'
MINIMUM/MAXIMUM CUL-DE-SAC ROADWAY LENGTH	N/A	N/A	250'/1600'	N/A
MINIMUM STREET GRADE	1.0%	1.0%	1.0%	1.0%
MAXIMUM STREET GRADE	7.0%	10.0%	12.0%	12.0%
MINIMUM CURB RETURN RADIUS	55'	35'	15'	15'
CLEAR SIGHT TRIANGLE (MAIN STREET/SIDE STREET)	550'/30'	500'/25'	250'/25'	250'/25'
HORIZONTAL CURVES MINIMUM CENTER LINE RADIUS	550' @ 45 MPH	350' @ 35 MPH	125' @ 25 MPH	100' @ 15 MPH
MINIMUM VERTICAL CURVE LENGTH	[A]150'	[A]100'	[A,B]50'	[A,B]50'

[A] - PLUS 20' FOR EVERY 1% CHANGE IN GRADE OVER 3%

[B] - AT A STOP CONDITION ONLY; A MINIMUM VERTICAL CURVE LENGTH OF 50' FROM THE EDGE OF PAVING, IS REQUIRED FOR INTERSECTING ROADWAYS ON LOCAL STREETS WITH MINIMUM/MAXIMUM OF -2% FROM CENTERLINE CROWN OF THE THROUGH STREET.

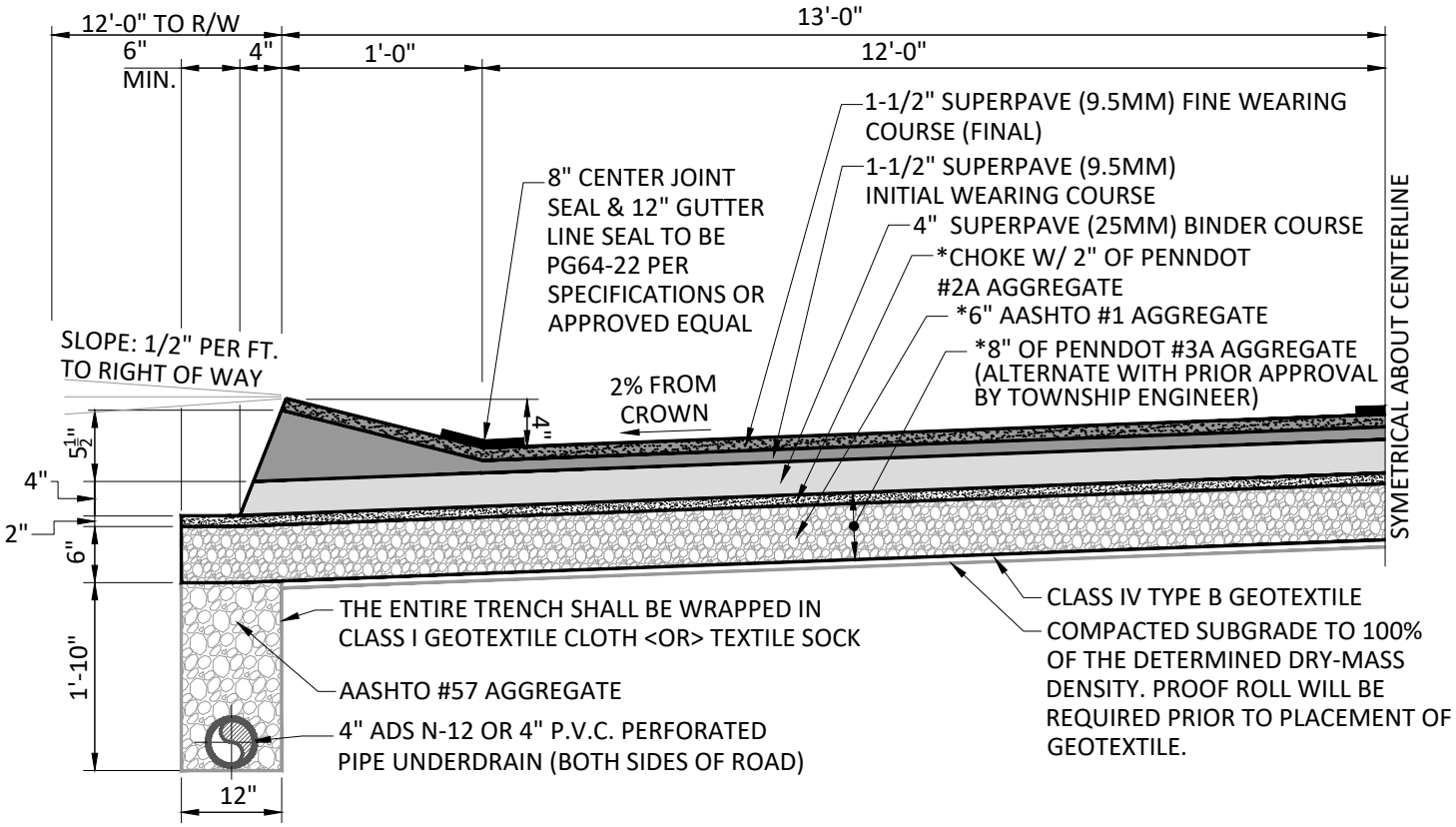
RESIDENTIAL SUBDIVISION	1,600' MAXIMUM DISTANCE BETWEEN STREET INTERSECTIONS
	200' MINIMUM DISTANCE BETWEEN STREET INTERSECTIONS

NORTH HUNTINGDON CONNECTED

ROADWAY DESIGN CRITERIA

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-001



TYPICAL PAVEMENT SECTION

NOTES:

- STORM INLETS SHALL BE SET TO FINISH GRADE OF INITIAL WEARING COURSE. PRIOR TO PLACING OF FINAL WEARING COURSE OF PAVING SHALL REQUIRE INLET RISERS FOR GRADE ADJUSTMENT AT STORM INLETS.

- FINAL WEARING COURSE SHALL BE PLACED 1 YEAR AFTER INITIAL WEARING COURSE OR WHEN MAJORITY OF CONSTRUCTION HAS BEEN COMPLETED AND AS DIRECTED BY THE TOWNSHIP ENGINEER.

- ALL DEPTHS SHOWN ARE COMPACTED DEPTHS. ALL MATERIALS SHALL CONFORM TO PENNDOT PUBLICATION 408.

- COMPANIES PLACING ASPHALT MUST HAVE CURRENT PENNDOT PREQUALIFICATIONS.

-8" CENTER JOINT SEAL AND 12" GUTTER LINE SEAL ARE TO BE PG64-22 PER SPECIFICATIONS OR APPROVED EQUAL.

- 4" SUPERPAVE (25mm) BINDER COURSE TO EXTEND TO BACK OF CURB LINE, MECHANICALLY COMPACTED PER SPECIFICATION.

- 4" REVEAL CURB TO BE CONSTRUCTED OF SUPERPAVE (9.5mm) FINE WEARING COURSE AND HAND ROLLED COMPACTED PER SPECIFICATIONS.

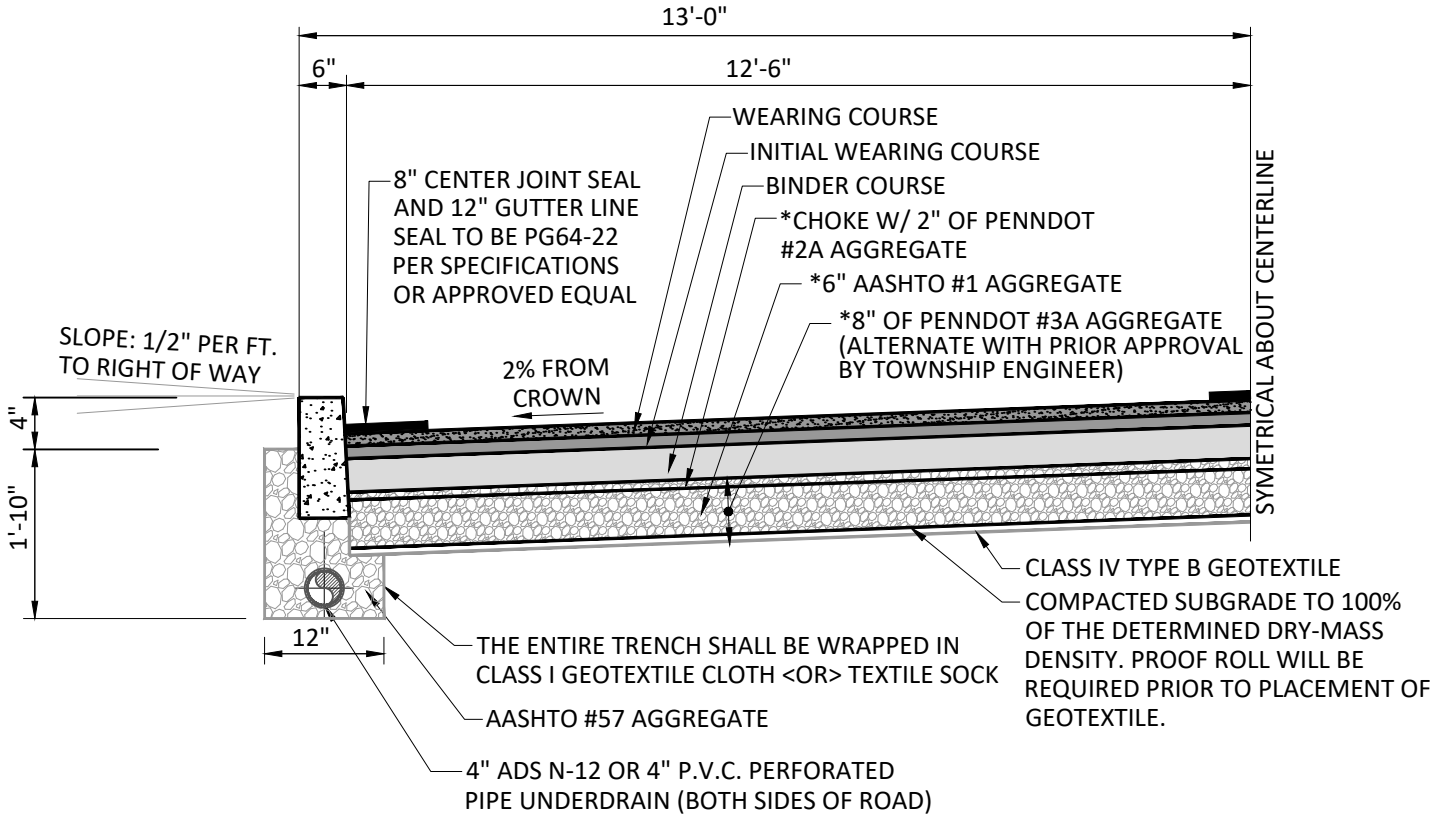
-*8" OF PENNDOT #3A AGGREGATE MAY BE USED AS AN ALTERNATE TO THE 2" & 6" AGGREGATE LAYERS WITH PRIOR APPROVAL BY TOWNSHIP ENGINEER.

NORTH HUNTINGDON CONNECTED

TYPICAL PAVING DETAIL

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-002



ALTERNATE PAVEMENT SECTION

INTENSITY CATEGORY	OVERALL ASPHALT THICKNESS (INCHES)	WRG COURSE THICKNESS	BASE / BINDER THICKNESS
DI-1	6"	3"	3"
DI-2	7"	3"	4"
DI-3	8"	3"	5"
DI-4	9"	3 1/2"	5 1/2"
DI-5	10"	3 1/2"	6 1/2"

NOTES:
- STORM INLETS SHALL BE SET TO FINISH GRADE OF INITIAL WEARING COURSE. PRIOR TO PLACING OF FINAL WEARING COURSE OF PAVING SHALL REQUIRE INLET RISERS FOR GRADE ADJUSTMENT AT STORM INLETS.

- FINAL WEARING COURSE SHALL BE PLACED 1 YEAR AFTER INITIAL WEARING COURSE OR WHEN MAJORITY OF CONSTRUCTION HAS BEEN COMPLETED AND AS DIRECTED BY THE TOWNSHIP ENGINEER.

- ALL DEPTHS SHOWN ARE COMPACTED DEPTHS. ALL MATERIALS SHALL CONFORM TO PENNDOT PUBLICATION 408.

- COMPANIES PLACING ASPHALT MUST HAVE CURRENT PENNDOT PREQUALIFICATIONS.

-8" CENTER JOINT SEAL AND 12" GUTTER LINE SEAL ARE TO BE PG64-22 PER SPECIFICATIONS OR APPROVED EQUAL.

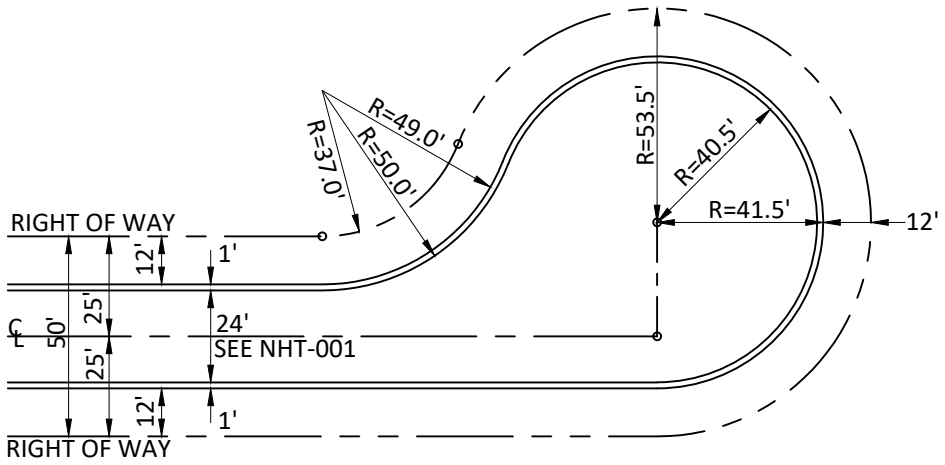
-*8" OF PENNDOT #3A AGGREGATE MAY BE USED AS AN ALTERNATE TO THE 2" & 6" AGGREGATE LAYERS WITH PRIOR APPROVAL BY TOWNSHIP ENGINEER.

NORTH HUNTINGDON CONNECTED

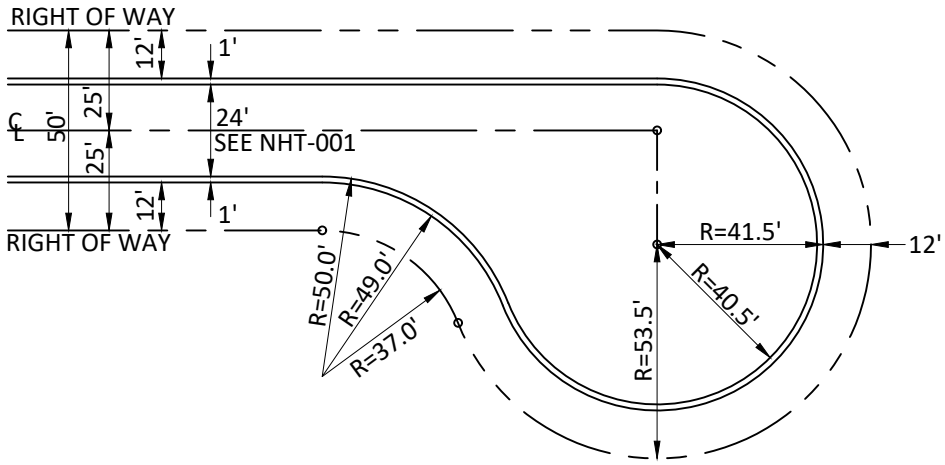
ALTERNATE PAVING DETAIL

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

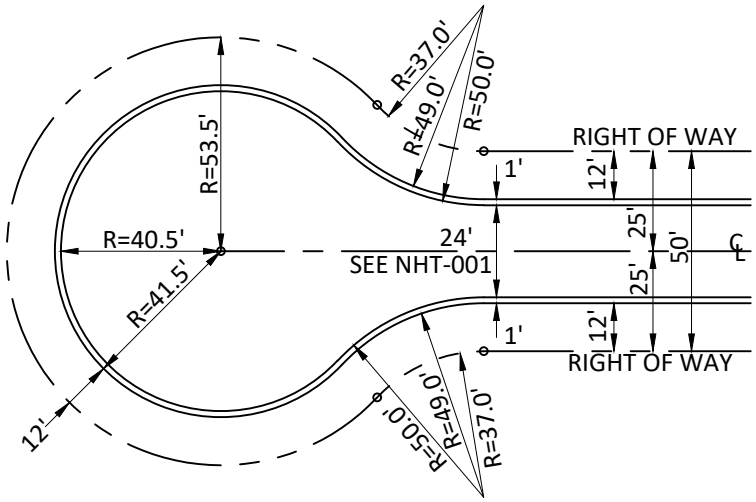
Not to Scale	SEPTEMBER 2020	NHT-003



TYPE A - PERMANENT CUL-DE-SAC



TYPE B - PERMANENT CUL-DE-SAC
(ALTERNATE WHEN APPROVED BY TOWNSHIP ENGINEER)



NOTE:
DEVELOPER MUST PROVIDE DESIGN ELEVATIONS AROUND ALL CUL-DE-SACS TO ASSURE DRAINAGE IS MAINTAINED ALONG THE CURB LINE AND DOES NOT SHEET FLOW THROUGH THE CUL-DE-SAC.

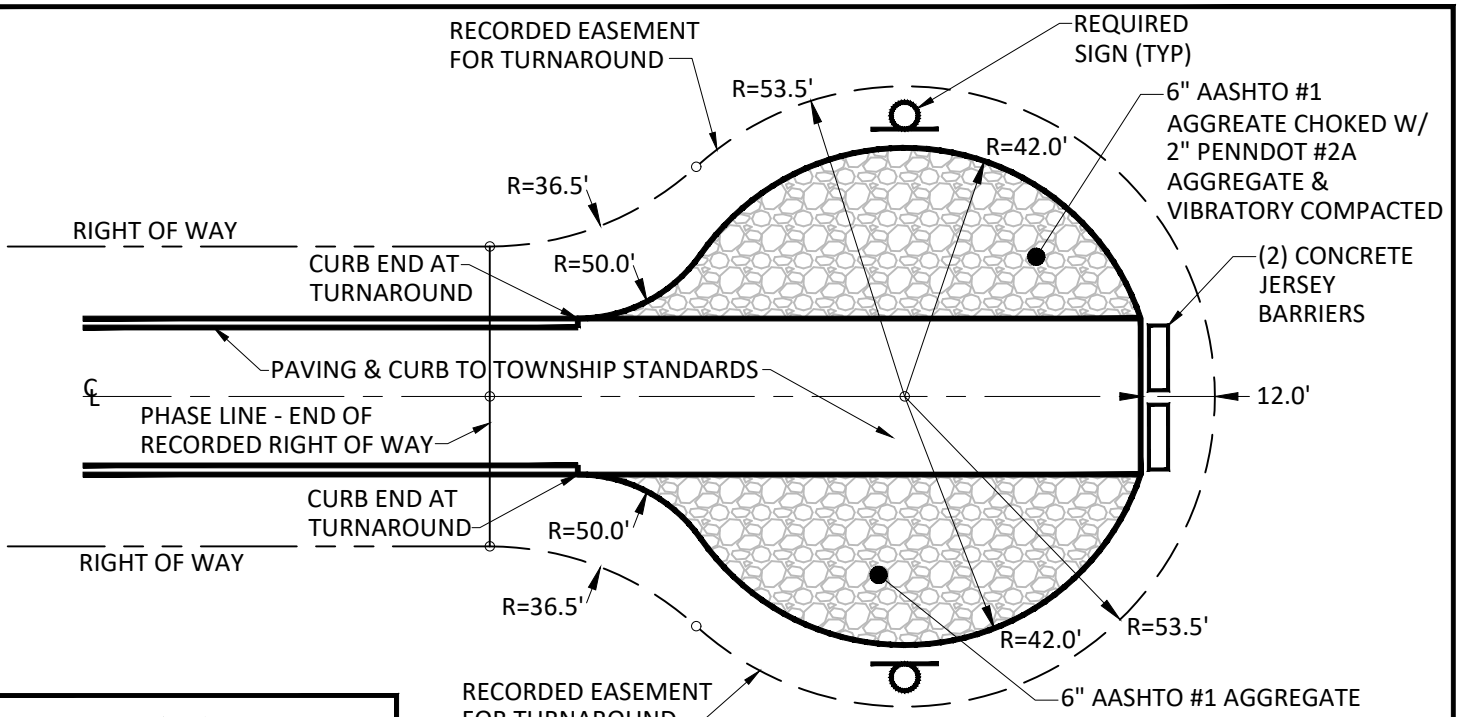
TYPE C - PERMANENT CUL-DE-SAC
(ALTERNATE WHEN APPROVED BY TOWNSHIP ENGINEER)

NORTH HUNTINGDON CONNECTED

PERMANENT CUL-DE-SAC DETAIL

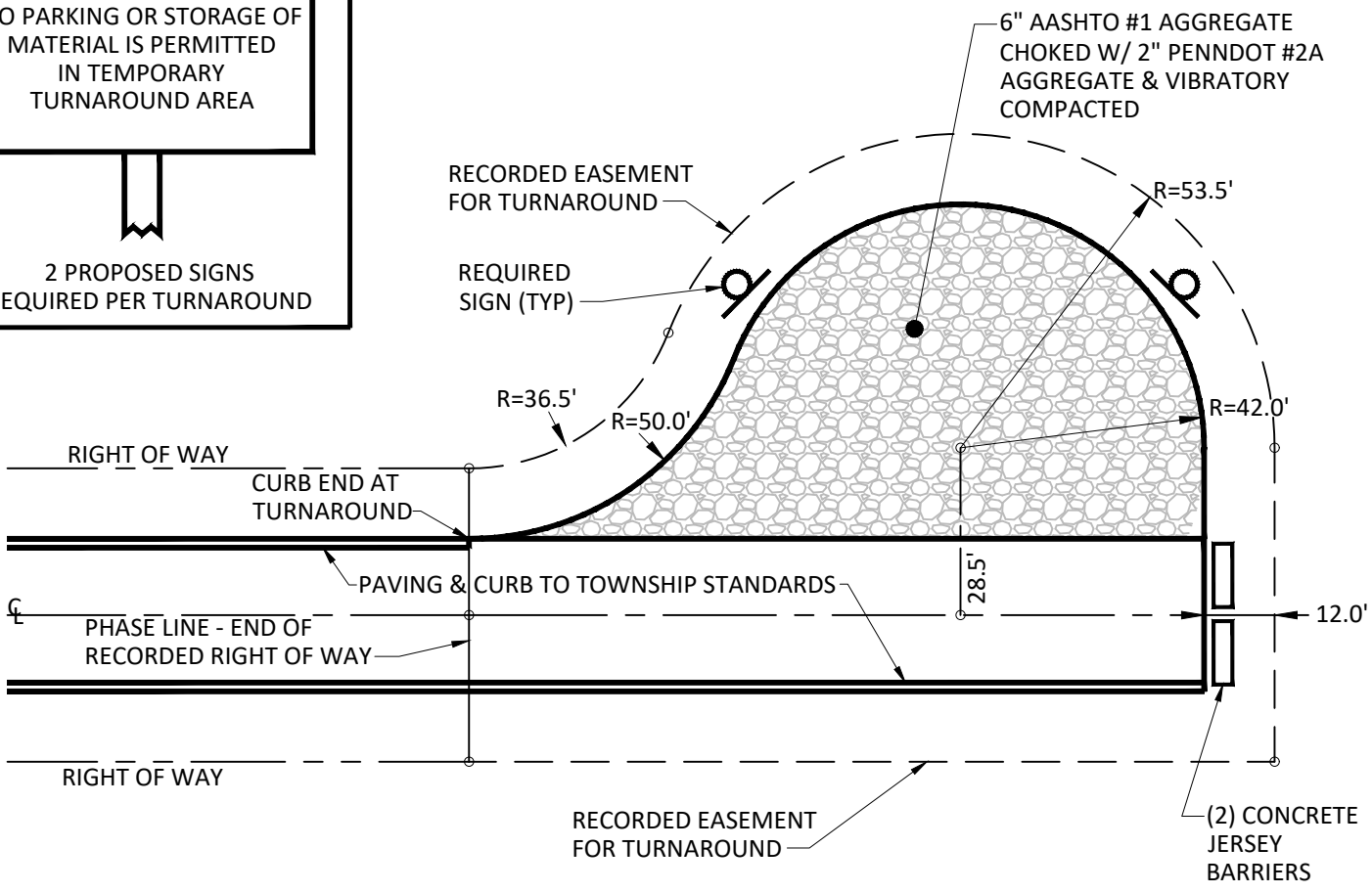
KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-004



NO PARKING OR STORAGE OF MATERIAL IS PERMITTED IN TEMPORARY TURNAROUND AREA

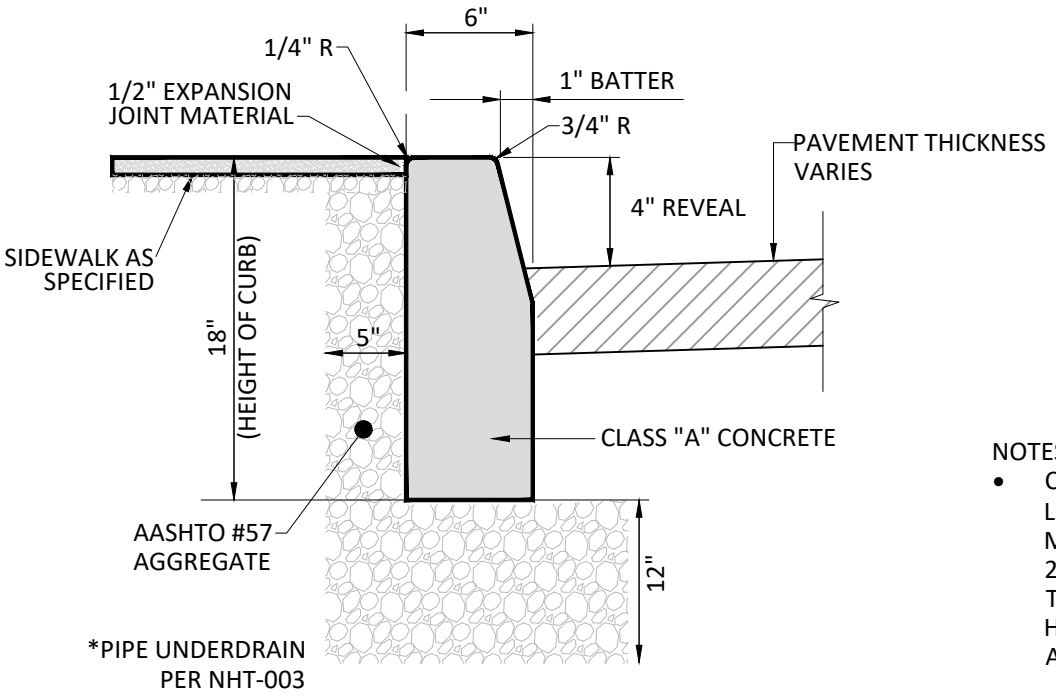
2 PROPOSED SIGNS REQUIRED PER TURNAROUND



NORTH HUNTINGDON CONNECTED

TEMPORARY CUL-DE-SAC DETAIL

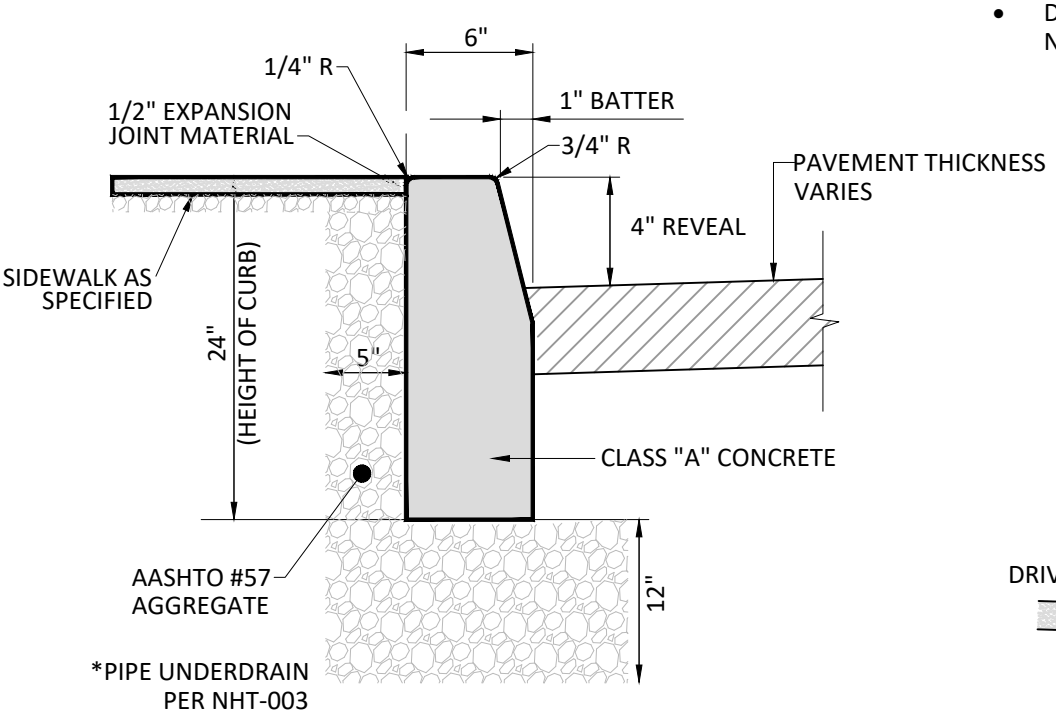
KU Resources, Inc. Innovative Solutions. Outstanding Support.	Not to Scale	SEPTEMBER 2020	NHT-005



MEDIUM SET COMMERCIAL/INDUSTRIAL PUBLIC ROAD CONCRETE CURB DETAIL

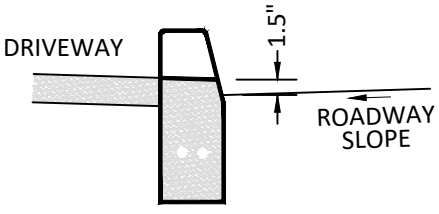
NOTES:

- CURB SECTIONS TO BE 10' LENGTHS, 1/2" EXPANSION JOINT MATERIAL SHALL BE PLACED AT 20' INTERVALS, AT ALL INLETS, AT THE END OF RADIUS RETURNS, AT HANDICAP RAMPS, AND ADJOINING ORIGINAL SECTIONS.
- ANY PAVEMENT OR SIDEWALK DAMAGED SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE TO THE ENGINEERS SPECIFICATIONS.
- DEPRESSED CURB FLARES MUST NOT EXCEED 10% SLOPE.



DEEP SET COMMERCIAL/INDUSTRIAL PUBLIC ROAD CONCRETE CURB DETAIL

(WHEN DIRECTED BY TOWNSHIP ENGINEER)



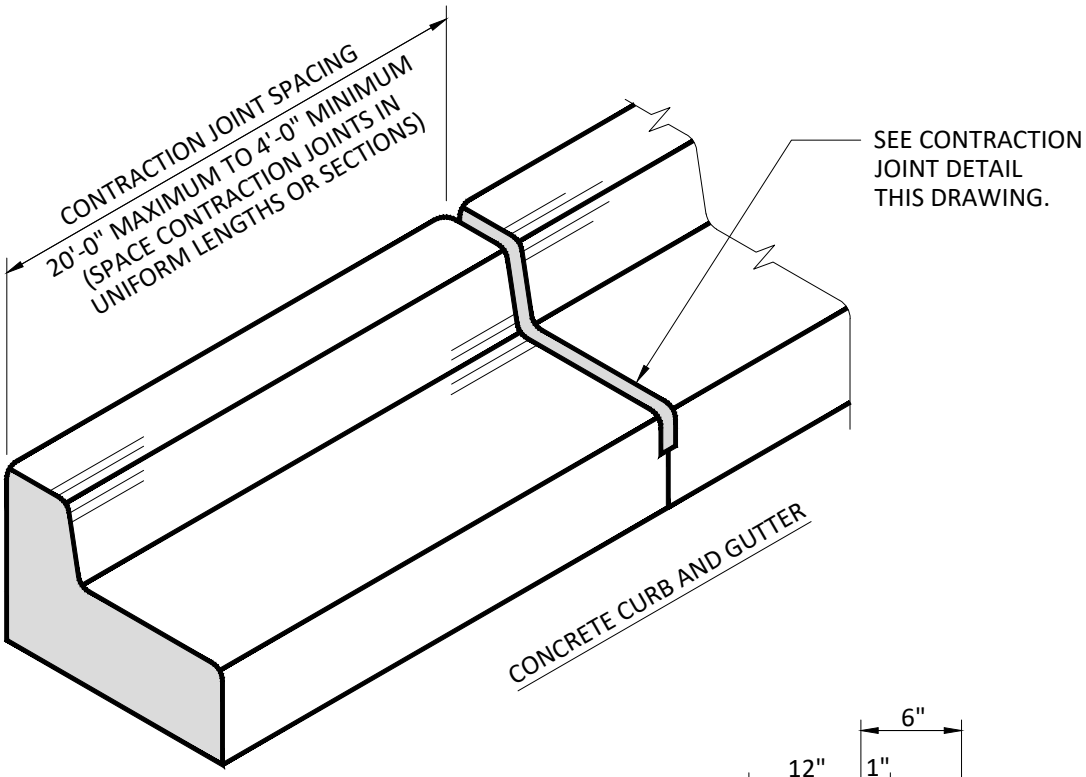
DEPRESSED CURB FOR DRIVEWAY

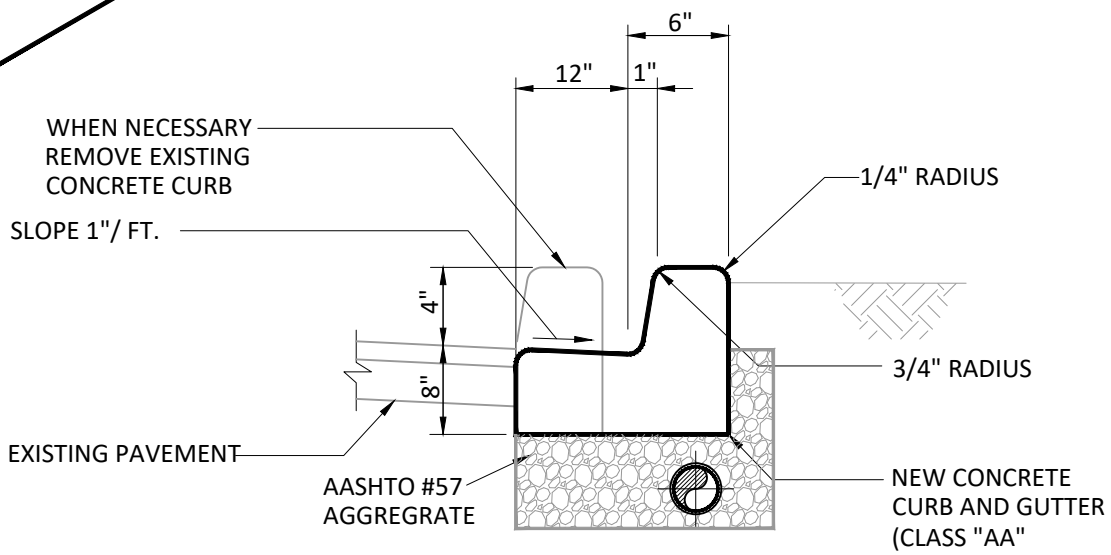
NORTH HUNTINGDON CONNECTED

MEDIUM AND DEEP SET CONCRETE CURB DETAILS

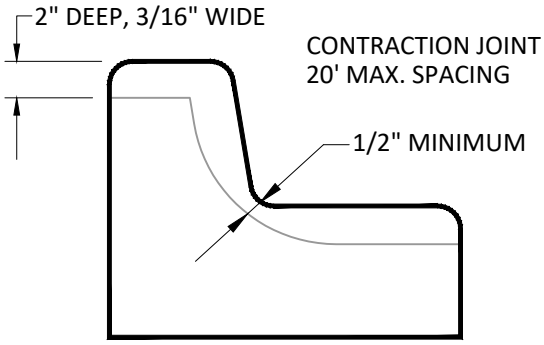
KU Resources, Inc. Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-006





INSTALLATION OF
CURB AND GUTTER



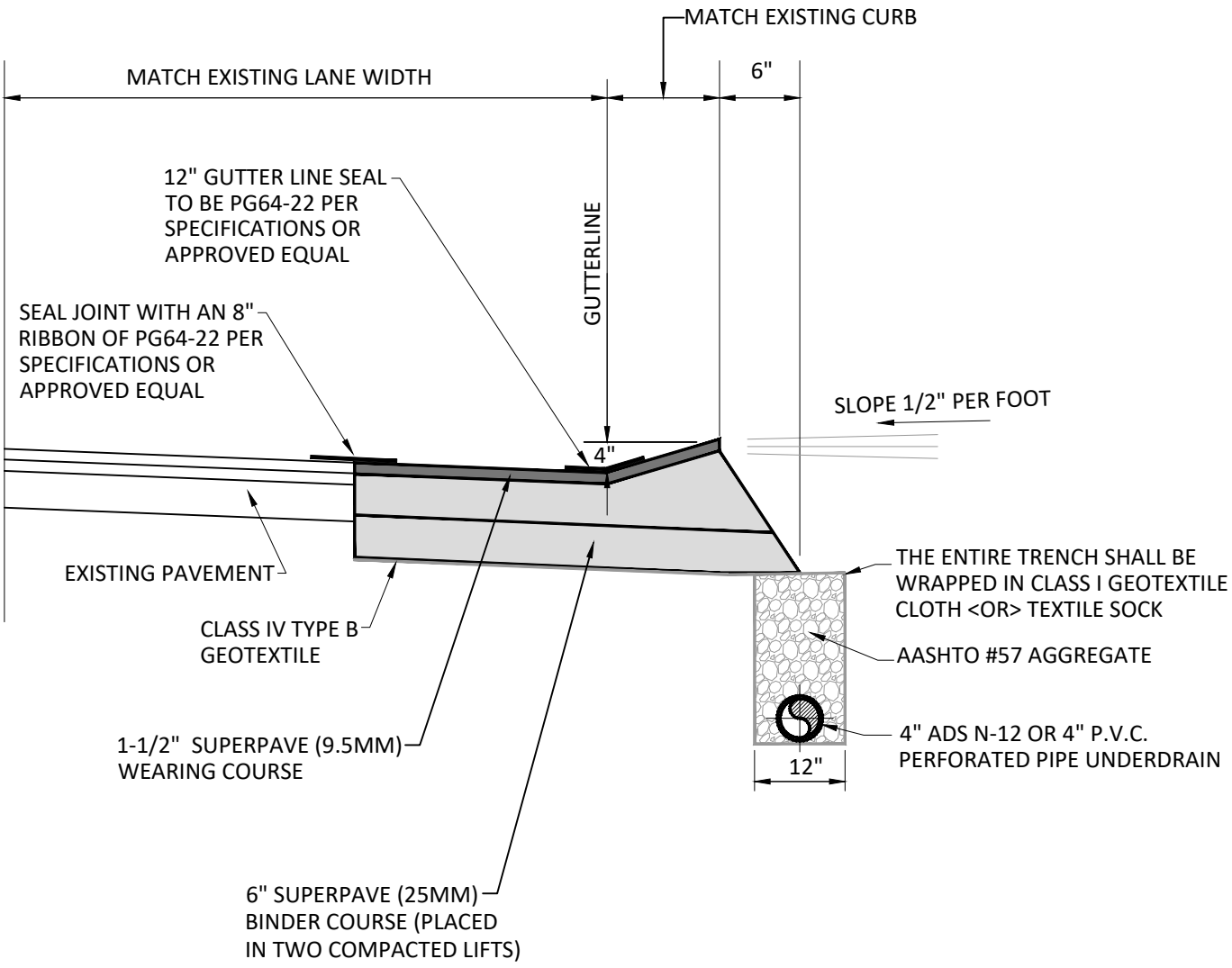
CONTRACTION JOINT DETAIL

NORTH HUNTINGDON CONNECTED

CONCRETE CURB AND GUTTER

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-007



NOTES:
- ALL DEPTHS SHOWN ARE COMPACTED DEPTHS.

- ALL MATERIALS SHALL CONFORM TO PENNDOT PUBLICATION 408.

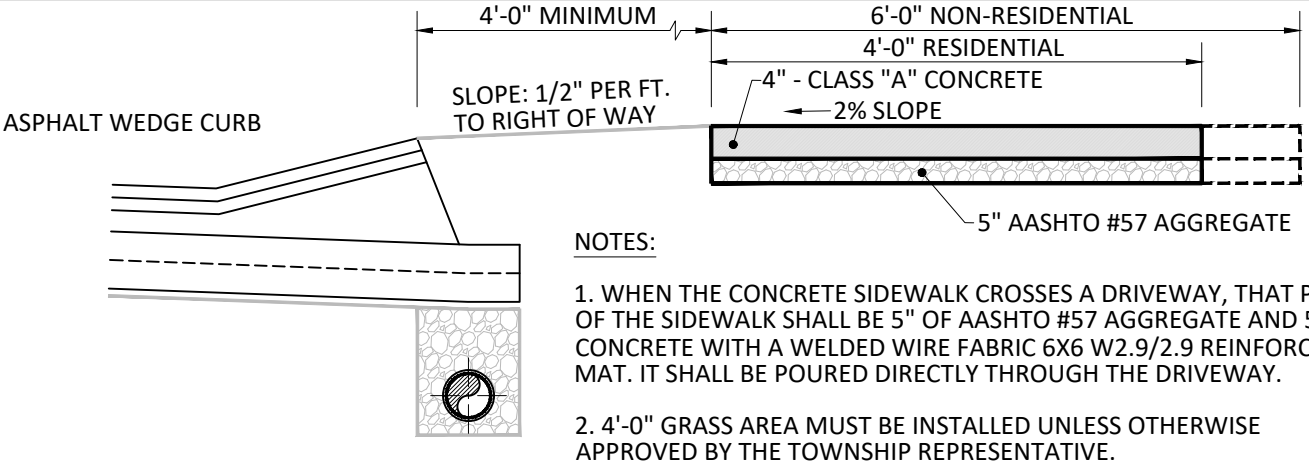
-IF APPLICABLE, CONNECT NEW PIPE UNDERDRAIN TO EXISTING SYSTEM.

NORTH HUNTINGDON CONNECTED

ASPHALT CURB REPLACEMENT

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-008

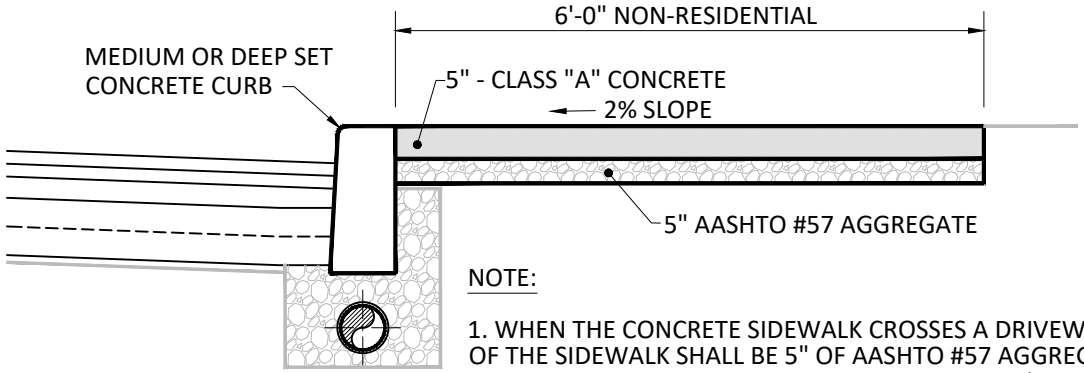


NOTES:

1. WHEN THE CONCRETE SIDEWALK CROSSES A DRIVEWAY, THAT PORTION OF THE SIDEWALK SHALL BE 5" OF AASHTO #57 AGGREGATE AND 5" OF CONCRETE WITH A WELDED WIRE FABRIC 6X6 W2.9/2.9 REINFORCING MAT. IT SHALL BE POURED DIRECTLY THROUGH THE DRIVEWAY.

2. 4'-0" GRASS AREA MUST BE INSTALLED UNLESS OTHERWISE APPROVED BY THE TOWNSHIP REPRESENTATIVE.

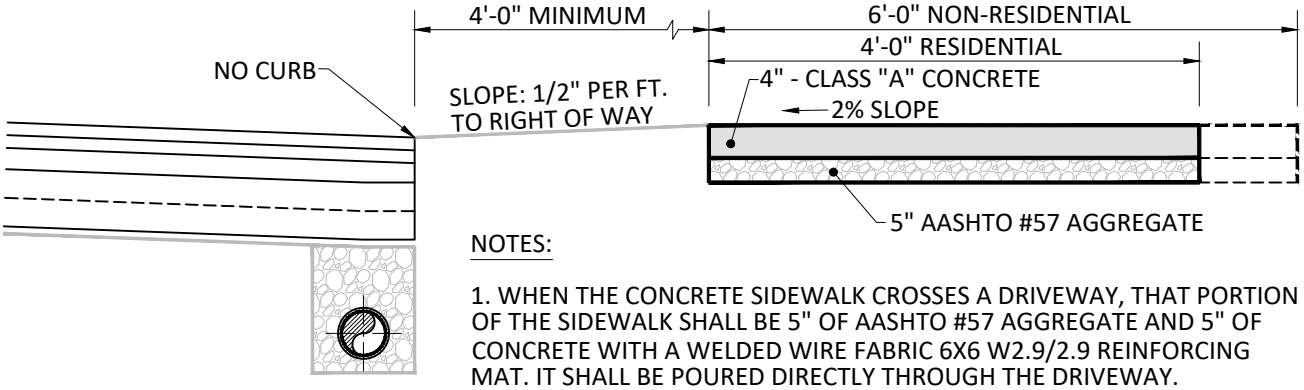
LOCAL RESIDENTIAL, COMMERCIAL OR INDUSTRIAL STREET, ASPHALT CURB



NOTE:

1. WHEN THE CONCRETE SIDEWALK CROSSES A DRIVEWAY, THAT PORTION OF THE SIDEWALK SHALL BE 5" OF AASHTO #57 AGGREGATE AND 5" OF CONCRETE WITH WELDED WIRE FABRIC 6X6 W2.9/2.9 REINFORCING MAT. IT SHALL BE POURED DIRECTLY THROUGH THE DRIVEWAY.

COMMERCIAL OR INDUSTRIAL STREET, CONCRETE CURB



NOTES:

1. WHEN THE CONCRETE SIDEWALK CROSSES A DRIVEWAY, THAT PORTION OF THE SIDEWALK SHALL BE 5" OF AASHTO #57 AGGREGATE AND 5" OF CONCRETE WITH A WELDED WIRE FABRIC 6X6 W2.9/2.9 REINFORCING MAT. IT SHALL BE POURED DIRECTLY THROUGH THE DRIVEWAY.

2. 4'-0" GRASS AREA MUST BE INSTALLED UNLESS OTHERWISE APPROVED BY THE TOWNSHIP REPRESENTATIVE.

LOCAL RESIDENTIAL, COMMERCIAL OR INDUSTRIAL STREET, NO CURB

NORTH HUNTINGDON CONNECTED

SIDEWALK DETAILS

KU Resources, Inc. Innovative Solutions. Outstanding Support.	Not to Scale	SEPTEMBER 2020	NHT-009

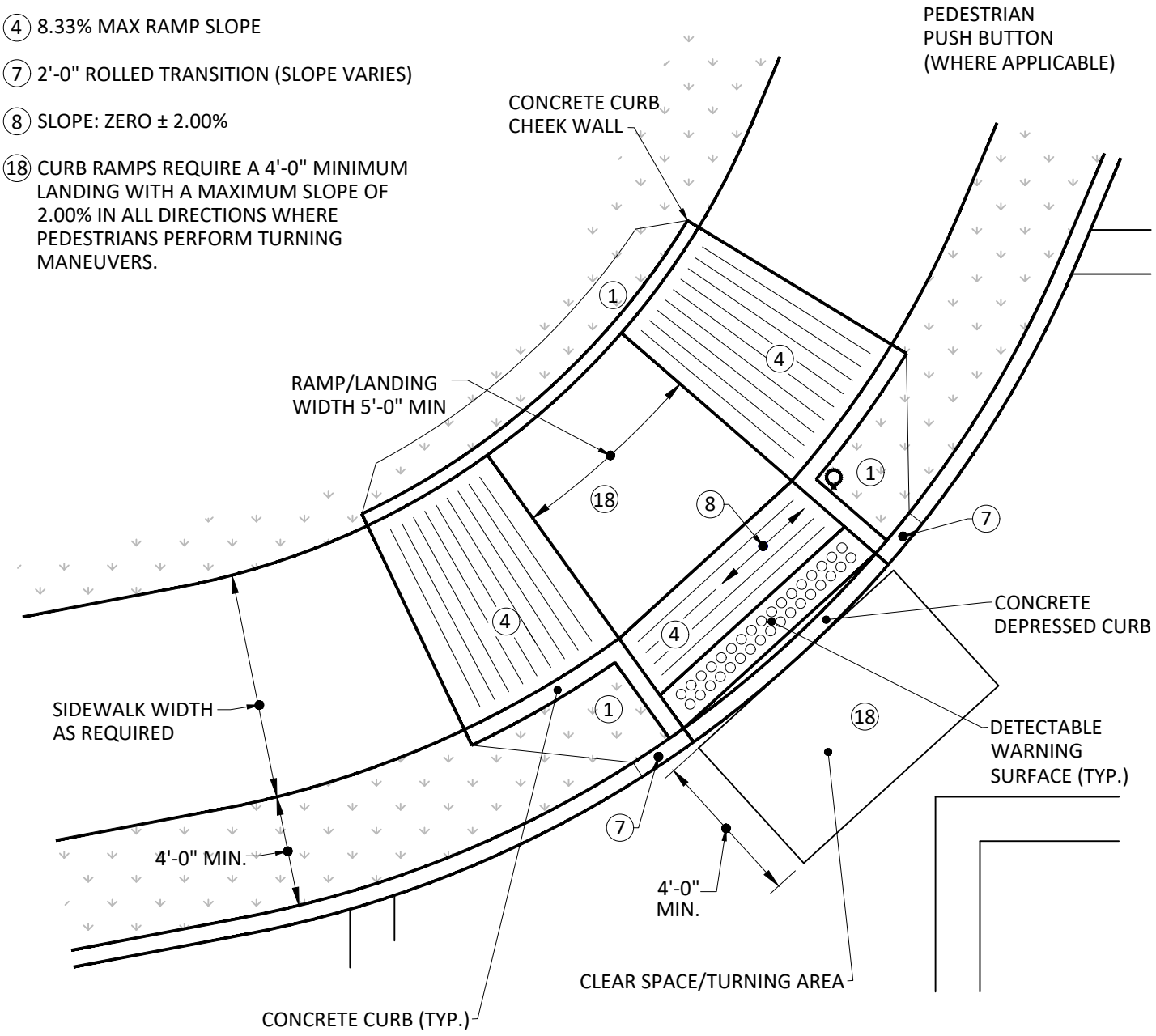
(1) GRADE FLARES 10.00% MAX SLOPE (WHEN PERMITTED BY TOWNSHIP ENGINEER)

(4) 8.33% MAX RAMP SLOPE

(7) 2'-0" ROLLED TRANSITION (SLOPE VARIES)

(8) SLOPE: ZERO ± 2.00%

(18) CURB RAMPS REQUIRE A 4'-0" MINIMUM LANDING WITH A MAXIMUM SLOPE OF 2.00% IN ALL DIRECTIONS WHERE PEDESTRIANS PERFORM TURNING MANEUVERS.



NOTES:

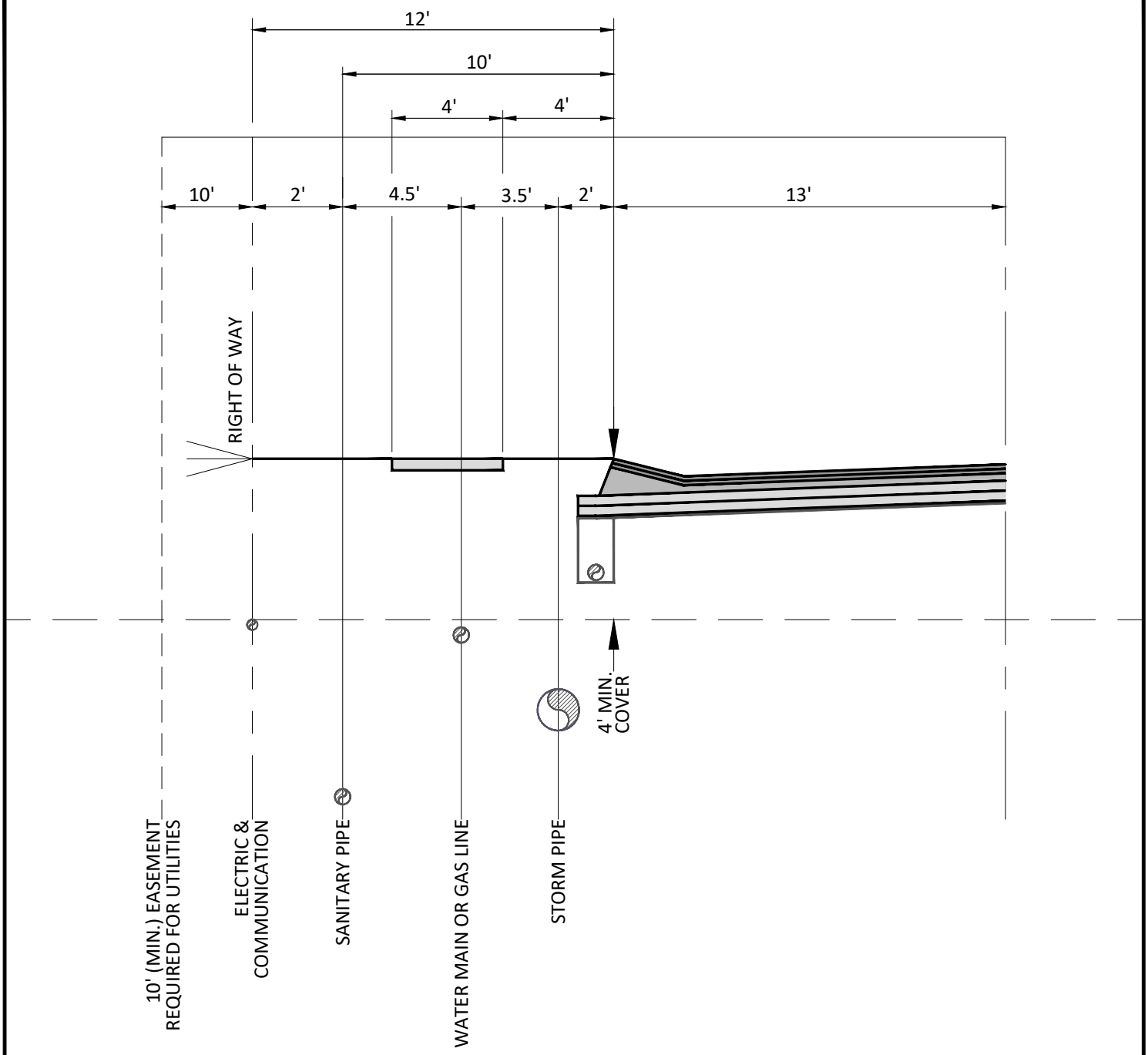
1. EXPOSED CONCRETE SURFACES TO BE COATED WITH CURING AND SEALING COMPOUNDS.
2. CONTRACTOR SHALL VERIFY CONSTRCTION MEETS OR EXCEEDS CURRENT ADA STANDARDS.
3. CONSTRUCTION AND DESIGN OF CURB RAMPS MUST BE IN COMPLIANCE WITH CURRENT PENNDOT RC-67M STANDARDS.

NORTH HUNTINGDON CONNECTED

TYPICAL CORNER CURB RAMP

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-010



NOTE:

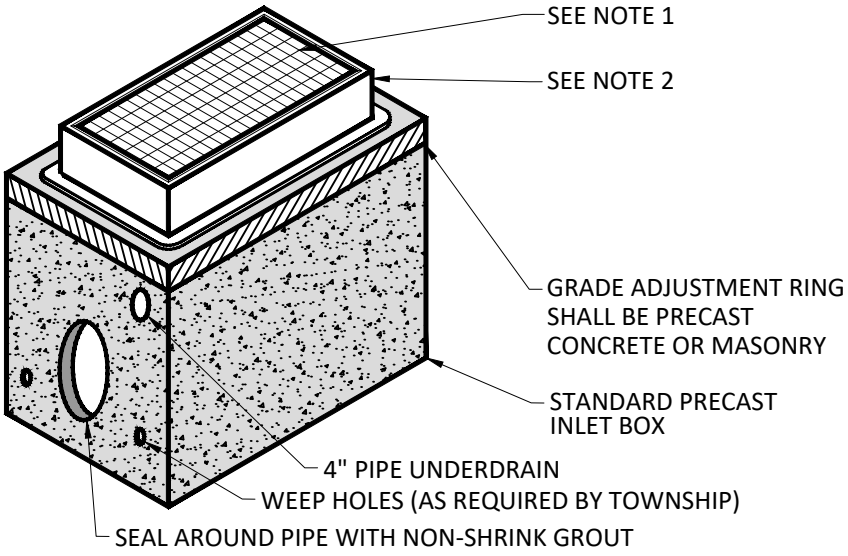
1. WARNING TAPE PLACED PER UTILITY STANDARD AND FULLY BACKFILLED WITH AASHTO #57 AGGREGATE AND SHALL BE INSPECTED ACCORDINGLY.
2. ALL UTILITIES CROSSING THE ROADWAY SHALL BE AT LEAST 4' BELOW THE TOP OF CURB.
3. UTILITY LOCATION MAY VARY DEPENDENT UPON SITUATION, BUT DIMENSIONS INDICATED WILL GOVERN.
4. SANITARY PIPE AND WATER MAIN MUST BE ON OPPOSITE SIDES OF THE STREET.
5. UTILITIES ARE NOT TO BE INSTALLED IN A STACKED POSITION IN RELATION TO EACH OTHER.
6. UPON THE COMPLETION OF CONSTRUCTION, A PLAN SHOWING THE ACTUAL CONSTRUCTED LOCATION OF ALL UTILITIES AND PAVING MUST BE PROVIDED TO THE TOWNSHIP.

NORTH HUNTINGDON CONNECTED

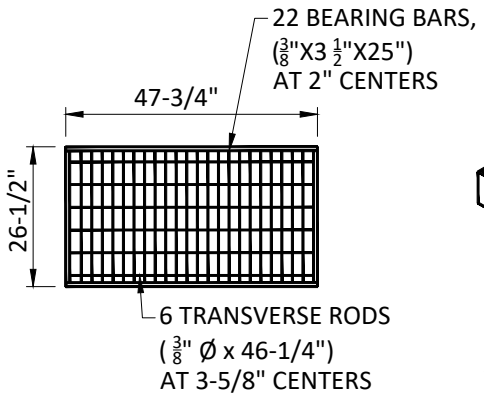
TYPICAL UTILITY LOCATION SECTION

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

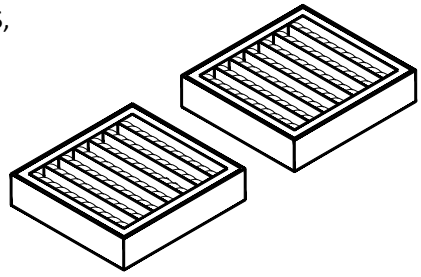
Not to Scale	SEPTEMBER 2020	NHT-011



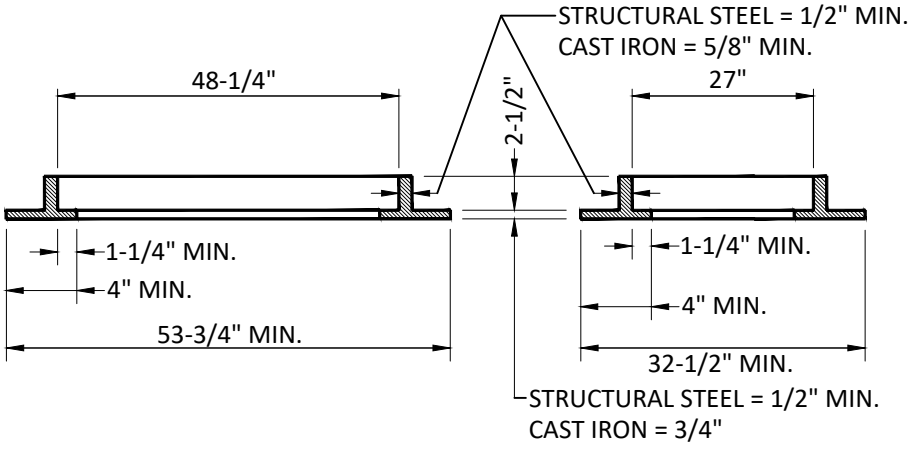
NOTE:
CONSTRUCT IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 605, FOR INLET ASSEMBLIES.



STRUCTURAL STEEL GRATE BICYCLE SAFE

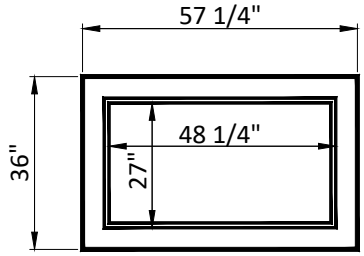


VANE GRATE
2 PIECE NEENAH TYPE R-3573-2L OR APPROVED EQUAL FOR ROAD GRADES EQUAL OR GREATER THAN 10% (TO BE SET IN LINE WITH FLOW DIRECTION)



SECTION A-A SECTION B-B

TYPE "M" FRAME



PLAN VIEW

NOTES:

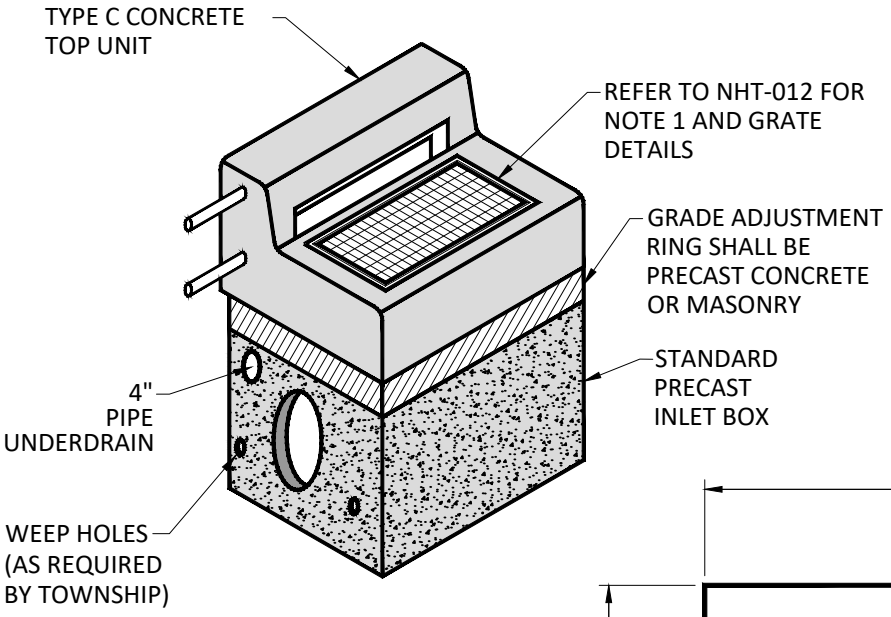
1. STRUCTURAL STEEL GRATE, BICYCLE SAFE PER PENNDOT RC-45M (SHT 8 OF 20).
2. STRUCTURAL STEEL OR CAST IRON TYPE "M" FRAME PER PENNDOT RC-45M (SHT 15 OF 20). INSTALL WITH CONSEAL BITUMASTIC SEALER BETWEEN FRAME AND INLET BOX.
3. ALL INLETS SHALL BE IN ACCORDANCE WITH SPECIFICATIONS SET FORTH IN PENNDOT PUBLICATION 408 AND 72 FOR PRECAST AND POURED IN PLACE INLETS.
4. CONCRETE INVERTS TO BE POURED TO FLOW LINE.
5. INLET SHALL BE SET TO GRADE OF INITIAL PAVEMENT. A RISER RING SHALL BE INSTALLED PRIOR TO APPLICATION OF FINAL WEARING COURSE.
6. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS, AS AMENDED, OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PENNDOT) PUBLICATION 408 SPECIFICATION, AS WELL AS PENNDOT'S ROADWAY CONSTRUCTION (RC) STANDARDS.

NORTH HUNTINGDON CONNECTED

TYPE "M" INLET

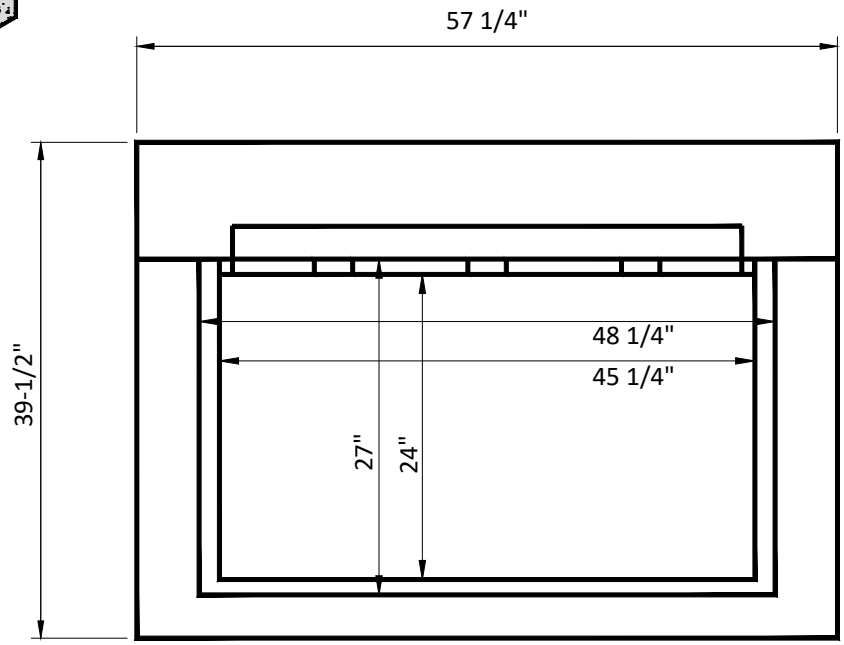
KU Resources, Inc. Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-012

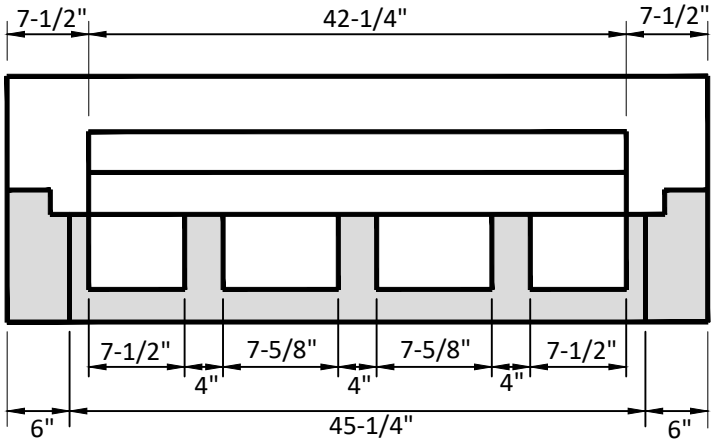


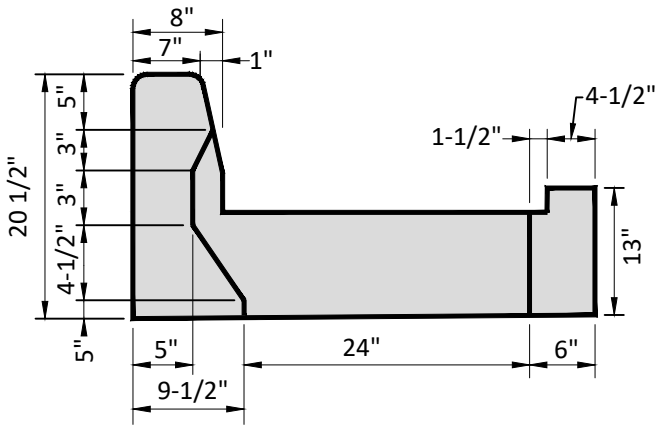
NOTES:

1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS, AS AMENDED, OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PENNDOT) PUBLICATION 408 SPECIFICATION, AS WELL AS PENNDOT'S ROADWAY CONSTRUCTION (RC) STANDARDS.
2. TRANSITION CONCRETE CURBS TO TOP OF CONCRETE UNIT OVER 4 FT. HORIZONTAL DISTANCE.
3. FOR USE WITH CONCRETE CURB AND ONLY WHEN APPROVED BY TOWNSHIP ENGINEER.



PLAN VIEW





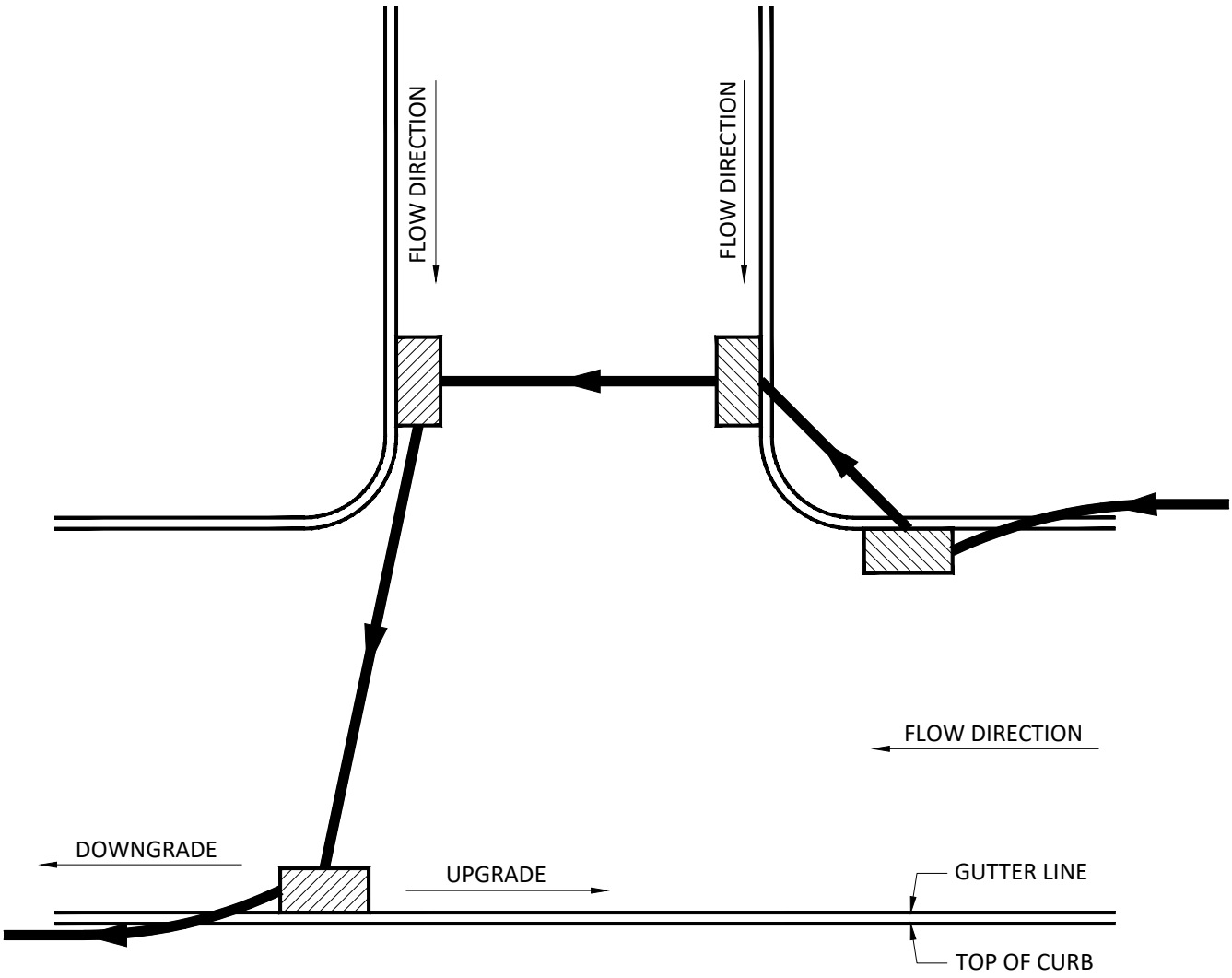
NORTH HUNTINGDON CONNECTED

TYPE "C" INLET

KU Resources, Inc. Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-013

NOTE:
INLETS SHALL BE PLACED ON TANGENT SECTION OF CURB PRIOR TO ENTERING RETURN RADIUS FOR INTERSECTION.



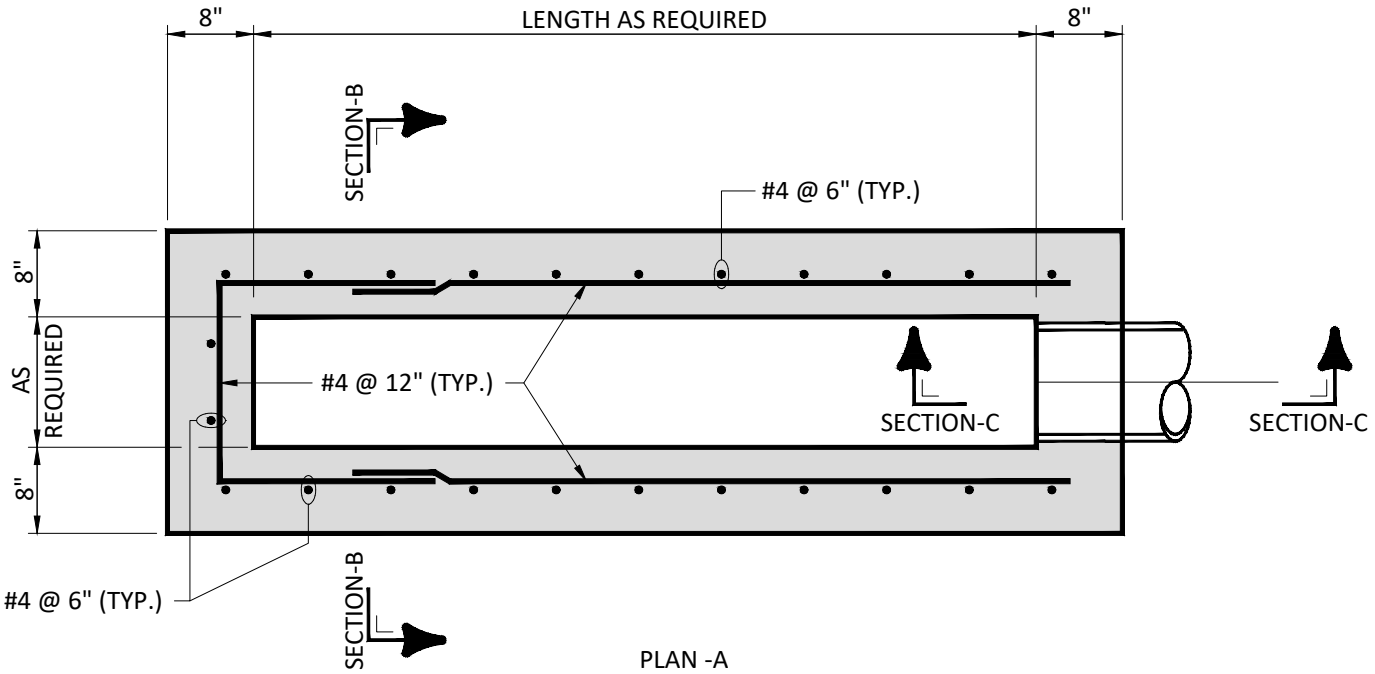
NOTE:
MAY BE REVISED AS APPROVED BY TOWNSHIP ENGINEER.

NORTH HUNTINGDON CONNECTED

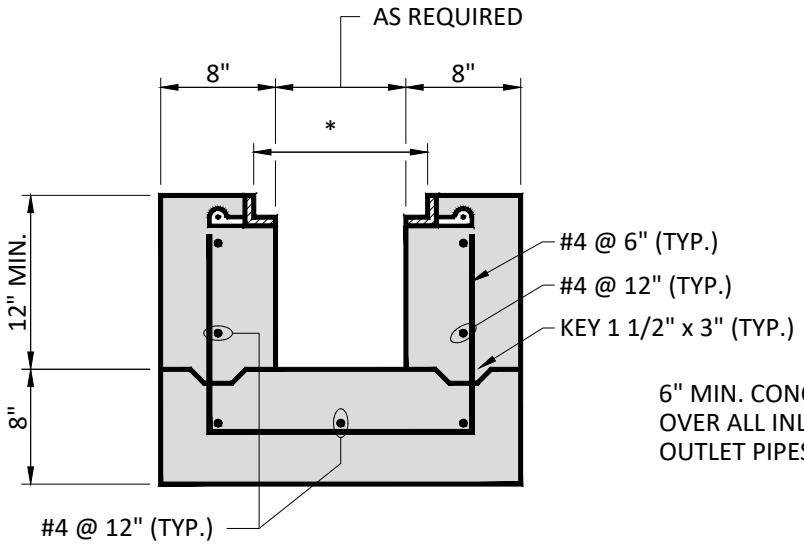
PLACEMENT OF INLETS

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

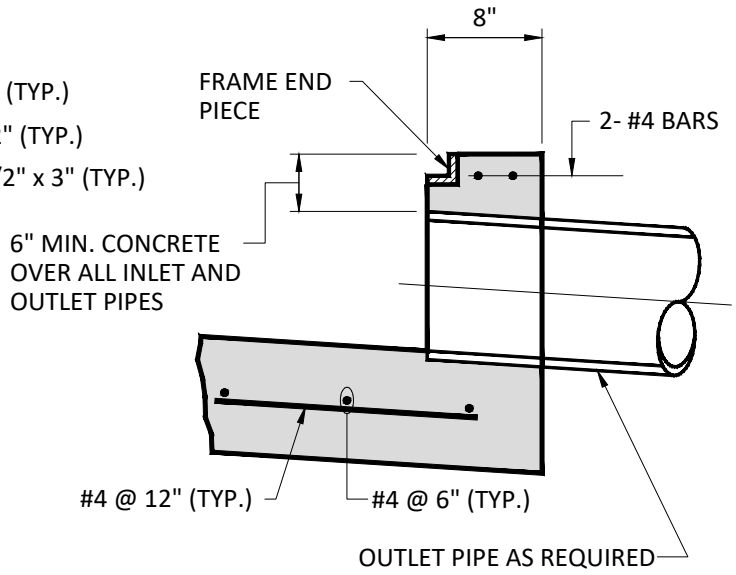
Not to Scale	SEPTEMBER 2020	NHT-014



PLAN -A



SECTION-B



SECTION-C

* FRAME WIDTH AS SPECIFIED

NORTH HUNTINGDON CONNECTED	TRENCH DRAIN		
KU Resources, Inc. Innovative Solutions. Outstanding Support.	Not to Scale	SEPTEMBER 2020	NHT-015

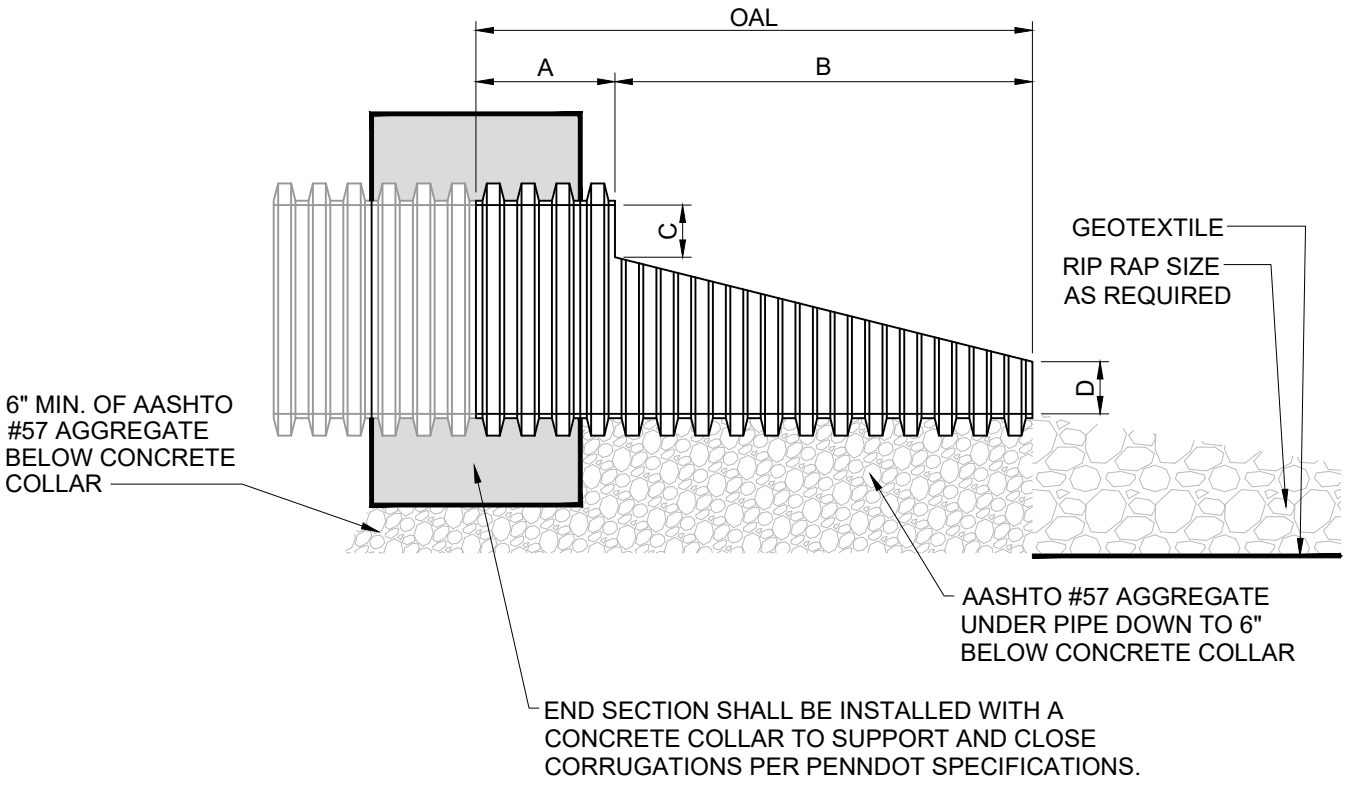
NOTES:

- NOT FOR USE AS A HEADWALL OR STORM WATER COLLECTION DEVICE.
- THE INVERT OF THE PIPE AND THE END SECTION SHALL BE AT THE SAME ELEVATION. SLOPED END SECTION SHALL BE HIGH-DENSITY POLYETHYLENE CONFORMING WITH THE MINIMUM REQUIREMENTS OF CELL CLASSIFICATION 335400C AS DEFINED AND DESCRIBED IN ASTM D3350. EACH END SECTION SHALL HAVE A CARBON BLACK ADDITIVE FOR UV PROTECTION. MATERIAL SHALL BE 'HANCOR RESIN 8' OR APPROVED EQUAL.
- INSTALLATION SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURER'S INSTRUCTIONS.
- TO BE INSTALLED IN LOCATIONS WHERE APPROVED BY TOWNSHIP ENGINEER.

	DIMENSIONS										
	SLOPE X:1			SLOPE 2:1		SLOPE 3:1		SLOPE 4:1		SLOPE 6:1	
PIPE DIA. (in.)	A* (in.)	C** (in.)	D (in.)	B (in.)	OAL (in.)	B (in.)	OAL (in.)	B (in.)	OAL (in.)	B (in.)	OAL (in.)
12	8	3	3	12	20	18	26	24	32	36	44
15	9.7	4	4	14.8	24.5	22	31.9	29.4	39.1	41.6	51.4
18	12	4.2	4	21	33	30	42	39	51	60	72

* THE 'A' LENGTH FOR 12"-18" IS 4 CORRUGATIONS

** THE 'C' DIMENSION VARIES SLIGHTLY FOR SOME DIAMETERS DEPENDING ON THE SLOPE



NORTH HUNTINGDON CONNECTED

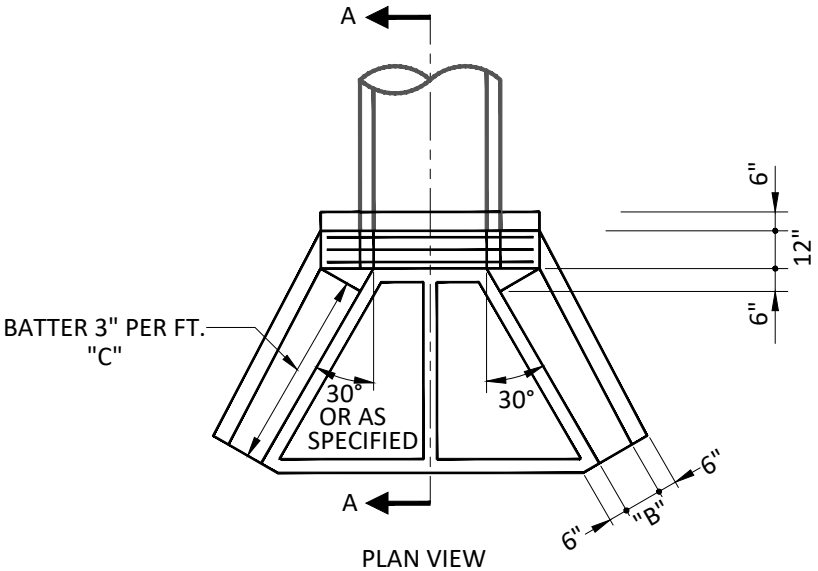
HDPE SLOPED END SECTION DETAIL

KU Resources, Inc. Innovative Solutions. Outstanding Support.

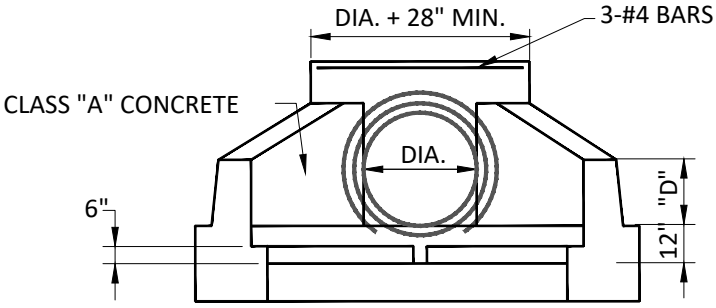
Not to Scale	SEPTEMBER 2020	NHT-016

PIPE DIA.	A	B	C	D	E	F
15"	2'-6"	9"	2'-0"	12"	1'-9"	9"
18"	2'-6"	9"	2'-0"	12"	2'-0"	9"
24"	3'-3"	9"	2'-0"	12"	2'-6"	9"
30"	4'-0"	12"	2'-6"	15"	3'-0"	12"

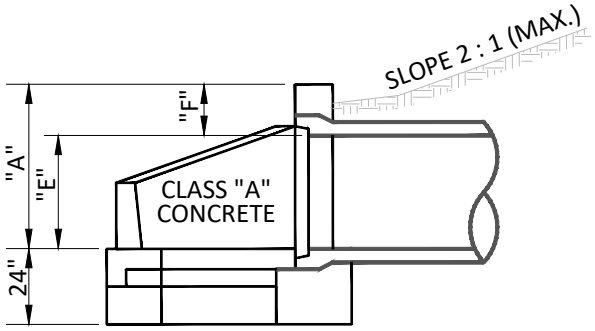
NOTE:
SHOP DRAWINGS FOR ALL PRECAST HEADWALLS/ENDWALLS OR CONCRETE END SECTION MUST BE SUBMITTED FOR APPROVAL.



PLAN VIEW



FRONT ELEVATION



SECTION "A-A"

NOTE:
RIP-RAP OR SOME OTHER FORM OF ENERGY DISSIPATION WILL BE REQUIRED AT TERMINATION OF DEVICE. REFER TO PA DEP EROSION AND SEDIMENTATION AND/OR SWM BMP MANUALS.

NORTH HUNTINGDON CONNECTED

CONCRETE END WALL (PIPE DIAMETERS: 15" TO 30")

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-017

TABLE A

2:1 EMBANKMENT SLOPES

PIPE DIA.	SKEW ∢ = 90° TO 60° θ = 30°			SKEW ∢ = 55° θ = 35°			SKEW ∢ = 50° θ = 40°			SKEW ∢ = 45° θ = 45°			SKEW ∢ = 40° θ = 50°			SKEW ∢ = 30° θ = 60°			SKEW ∢ = 20° θ = 70°			SKEW ∢ = 10° θ = 80°				
d	L	Q	W_1	L	Q	W_1	L	Q	W_1	L	Q	W_1	L	Q	W_1	L	Q	W_1	L	Q	W_1	L	Q	W_1	W_2	A
(in.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(in.)
36	5.8	0	4.6	6.0	.33	4.9	6.2	.5	5.2	6.5	.67	5.7	7.0	.75	6.2	8.3	1.33	8.0	11.1	1.75	11.7	19.6	5.0	23.0	4.6	12
42	6.3	0	5.8	6.6	.33	6.1	6.9	.5	6.5	7.3	.67	7.1	7.8	.75	7.8	9.3	1.33	10.0	12.5	1.75	14.6	22.5	5.0	28.8	5.8	12
48	6.9	0	6.9	7.2	.33	7.3	7.5	.5	7.8	8.0	.67	8.5	8.5	.75	9.4	10.3	1.33	12.0	14.0	1.75	17.5	25.3	5.0	34.6	6.9	12
54	7.5	0	8.0	7.8	.33	8.5	8.2	.5	9.1	8.7	.67	9.9	9.3	.75	10.9	11.3	1.33	14.0	15.5	1.75	20.5	28.2	5.0	40.3	8.0	12
60	8.1	0	9.2	8.4	.33	9.8	8.8	.5	10.4	9.4	.67	11.3	10.1	.75	12.5	12.3	1.33	16.0	16.9	1.75	23.4	31.1	5.0	46.0	9.2	15
72	9.2	0	11.5	9.6	.33	12.2	10.1	.5	13.0	10.8	.67	14.1	11.7	.75	15.6	14.3	1.33	20.0	19.8	1.75	29.2	36.9	5.0	57.6	11.5	15

$SD = \frac{d}{\cos\theta} = \frac{d}{\sin \text{Skew } \measuredangle}$

$L = SD + 2.3$ FT.

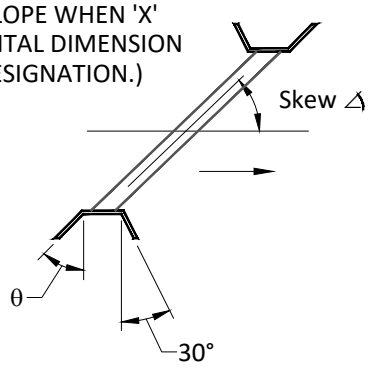
$W_1 = \frac{2d - 2'}{\cos\theta}$ (FOR 2:1 SLOPE)

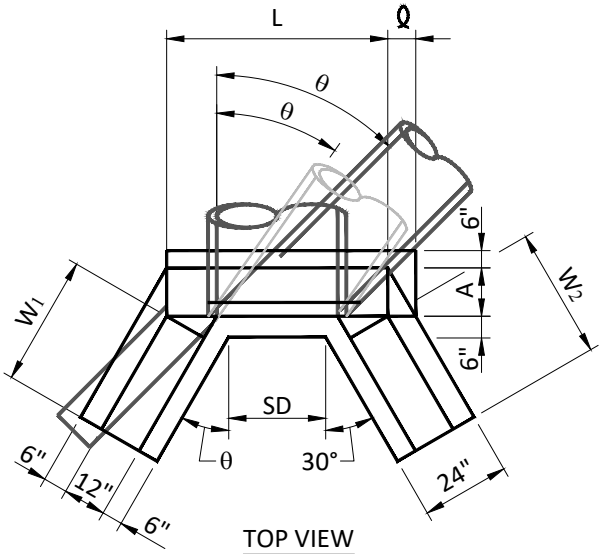
$W_1 = \frac{X}{\cos\theta}\left(d - 0.5 - \frac{1.0}{X}\right)$

(FOR VARIABLE SLOPE WHEN 'X' EQUALS HORIZONTAL DIMENSION OF THE SLOPE DESIGNATION.)

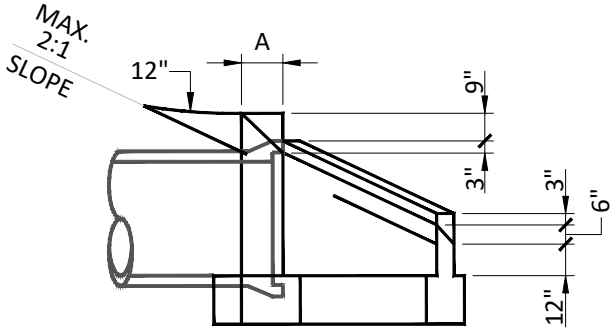
NOTE:
REINFORCING STEEL SHALL BE REQUIRED THROUGH SHOP DRAWING SUBMITTAL.

RIP-RAP OR SOME OTHER FORM OF ENERGY DISSIPATION WILL BE REQUIRED AT TERMINATION OF DEVICE. REFER TO PA DEP EROSION AND SEDIMENTATION AND/OR SWM BMP MANUALS.

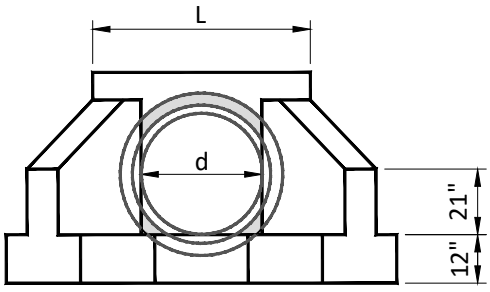




TOP VIEW



SIDE VIEW



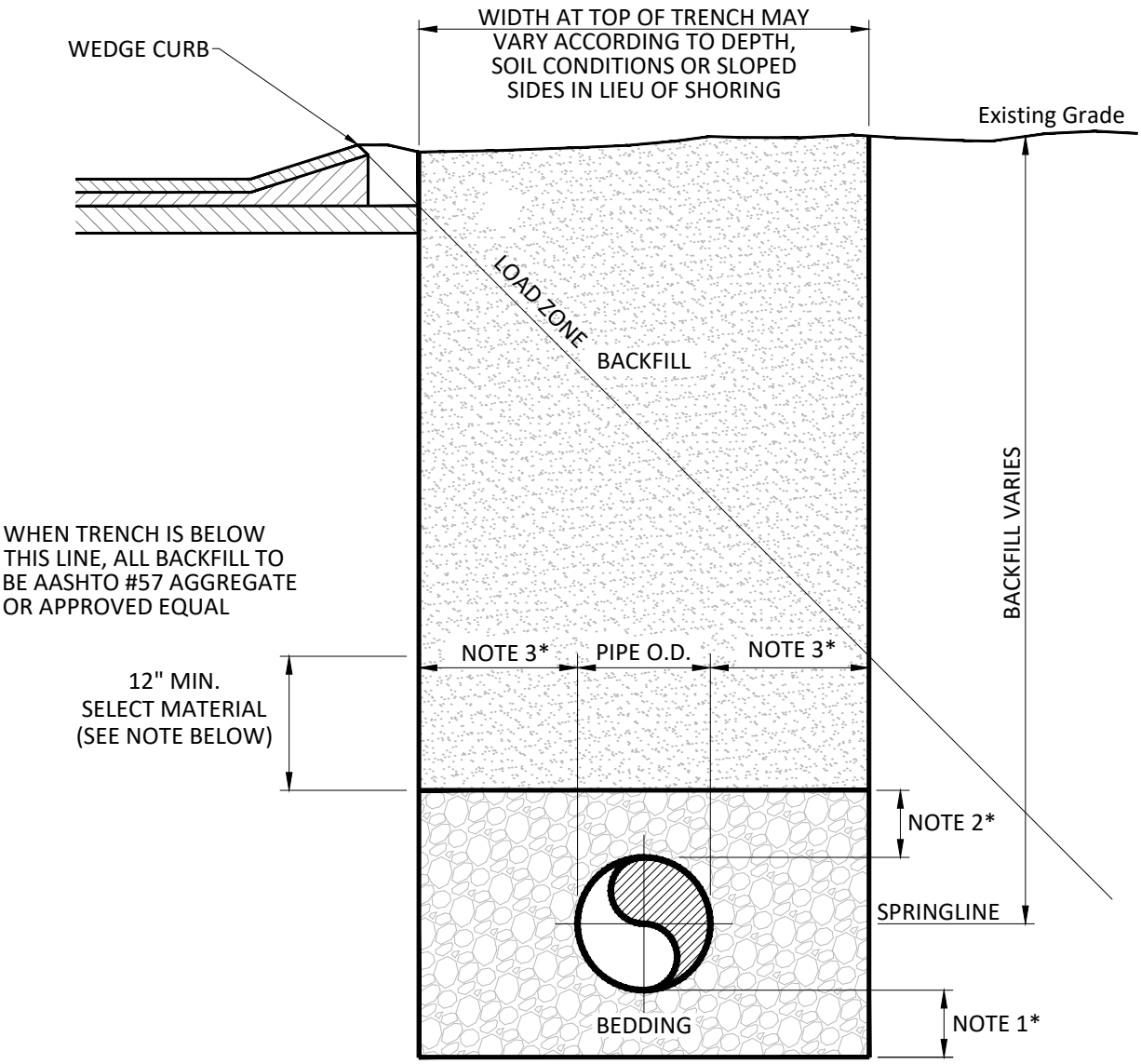
END VIEW

NORTH HUNTINGDON CONNECTED

CONCRETE END WALL (PIPE DIAMETERS: 36" TO 72")

KU Resources, Inc. Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-018



NOTES:

1. BEDDING DEPTH PER MANUFACTURER OR DESIGN ENGINEER UPON APPROVAL OF TOWNSHIP ENGINEER. IN NO CASES LESS THAN FOUR INCHES (4") COMPACTED AASHTO #57 AGGREGATE OR APPROVED EQUAL.

2. BACKFILL ABOVE TOP OF PIPE PER MANUFACTURER OR DESIGN ENGINEER UPON APPROVAL OF TOWNSHIP ENGINEER. IN NO CASES LESS THAN SIX INCHES (6") COMPACTED AASHTO #57 AGGREGATE OR APPROVED EQUAL, WITH EXCEPTION TO POLYPROPYLENE PIPE MEETING AASHTO M330 WHEN USED OUTSIDE OF LOAD ZONES. ALL STREET, SIDEWALK, PARKING AREA CROSSINGS, OR AREA WITHIN 5' OF CURB LINE SHALL BE BACKFILLED AND COMPACTED TO SUBGRADE WITH AASHTO #57 AGGREGATE OR APPROVED EQUAL. IN ALL OTHER TRENCH AREAS BACKFILL FROM MIN. (0'-6") ABOVE THE TOP OF PIPE TO BE SELECT MATERIAL (SELECT MATERIAL IS FINELY DIVIDED MATERIAL FREE OF DEBRIS, ORGANIC MATERIAL AND STONES) COMPACTED IN EIGHT INCH (8") LAYERS.

3. TRENCH WIDTH PER MANUFACTURER OR DESIGN ENGINEER UPON APPROVAL OF TOWNSHIP ENGINEER. IN NO CASES LESS THAN EIGHT INCHES (8") AASHTO #57 AGGREGATE OR APPROVED EQUAL ON BOTH SIDES FROM RESPECTIVE OUTSIDE EDGE OF PIPE.

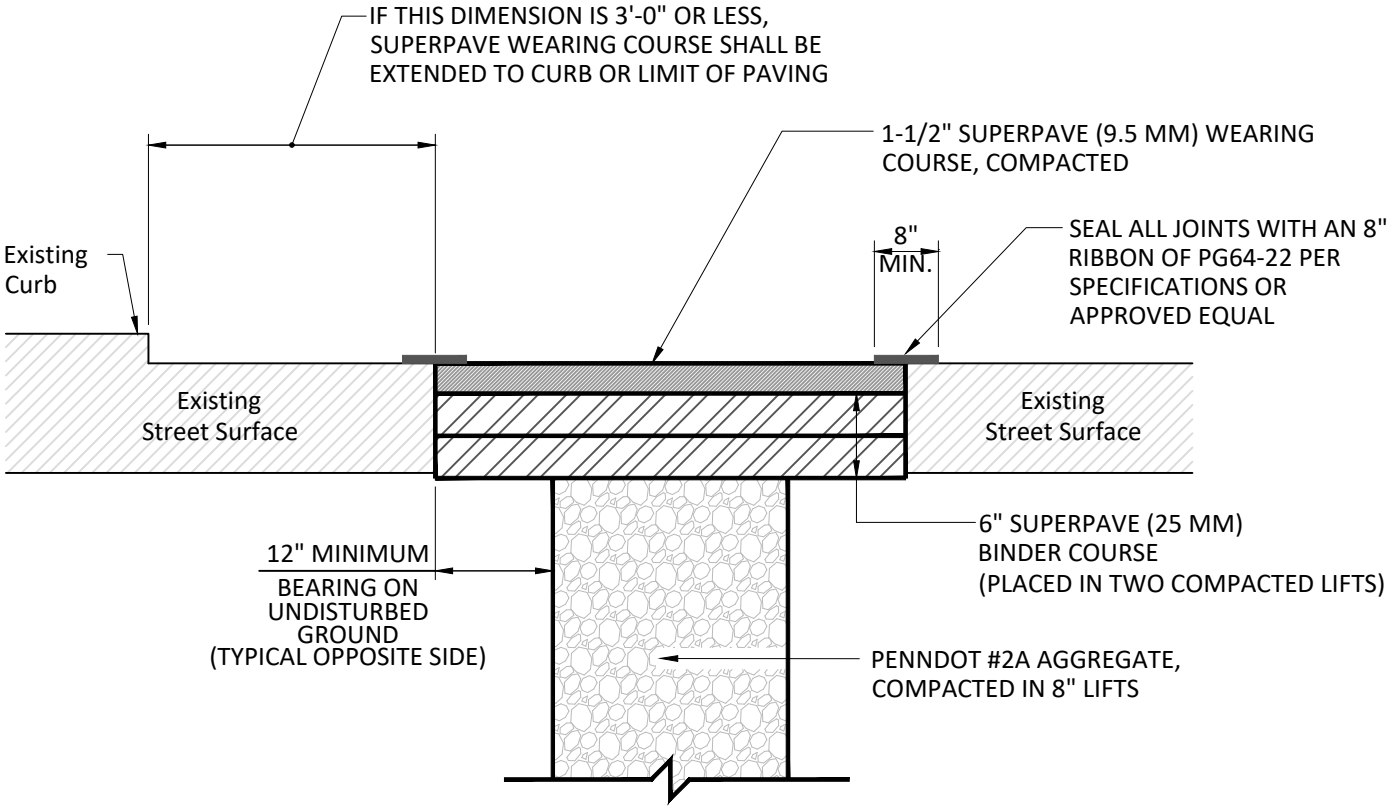
*FOR NOTE 1, NOTE 2, & NOTE 3: THE TOWNSHIP RESERVES THE RIGHT TO MODIFY THESE PARAMETERS DURING CONSTRUCTION IF MUCK, ROCK, OR OTHER UNSUITABLE MATERIALS OR CONDITIONS ARE DISCOVERED.

NORTH HUNTINGDON CONNECTED

PIPE TRENCHING AND BEDDING DETAIL

KU Resources, Inc. Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-019



NOTES:

1. DURING COLD WEATHER WHEN SUPERPAVE MATERIAL IS NOT AVAILABLE FROM THE ASPHALT PLANTS THE TRENCH SHALL BE BACKFILLED WITH PENNDOT #2A AGGREGATE TO AN ELEVATION WITHIN 3" OF THE ROAD SURFACE. THE TRENCH SHALL THEN BE SURFACED WITH A TEMPORARY PATCH OF COLD PATCH MATERIAL. AS SOON AS THE ASPHALT PLANTS OPEN IN THE SPRING, THE CONTRACTOR SHALL REMOVE THE COLD PATCH MATERIAL AND SAW-CUT THE REQUIRED BENCHES AND THE SUPERPAVE MATERIAL SHALL THEN BE PLACED AND SEALED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE ON THE TEMPORARY PATCH AND SHALL KEEP A SMOOTH RIDING SURFACE ON THE STREET.

2. PRIOR TO EXCAVATION, PATCH SHALL BE SAW CUT BACK A MINIMUM OF 12" FROM EACH EDGE OF THE TRENCH TO PROVIDE A FIRM BENCH FOR THE EDGES OF THE PATCH.

3. REFERENCE SUPERPAVE PER PENNDOT SECTION 409, MIXTURE & DESIGN STANDARDS.

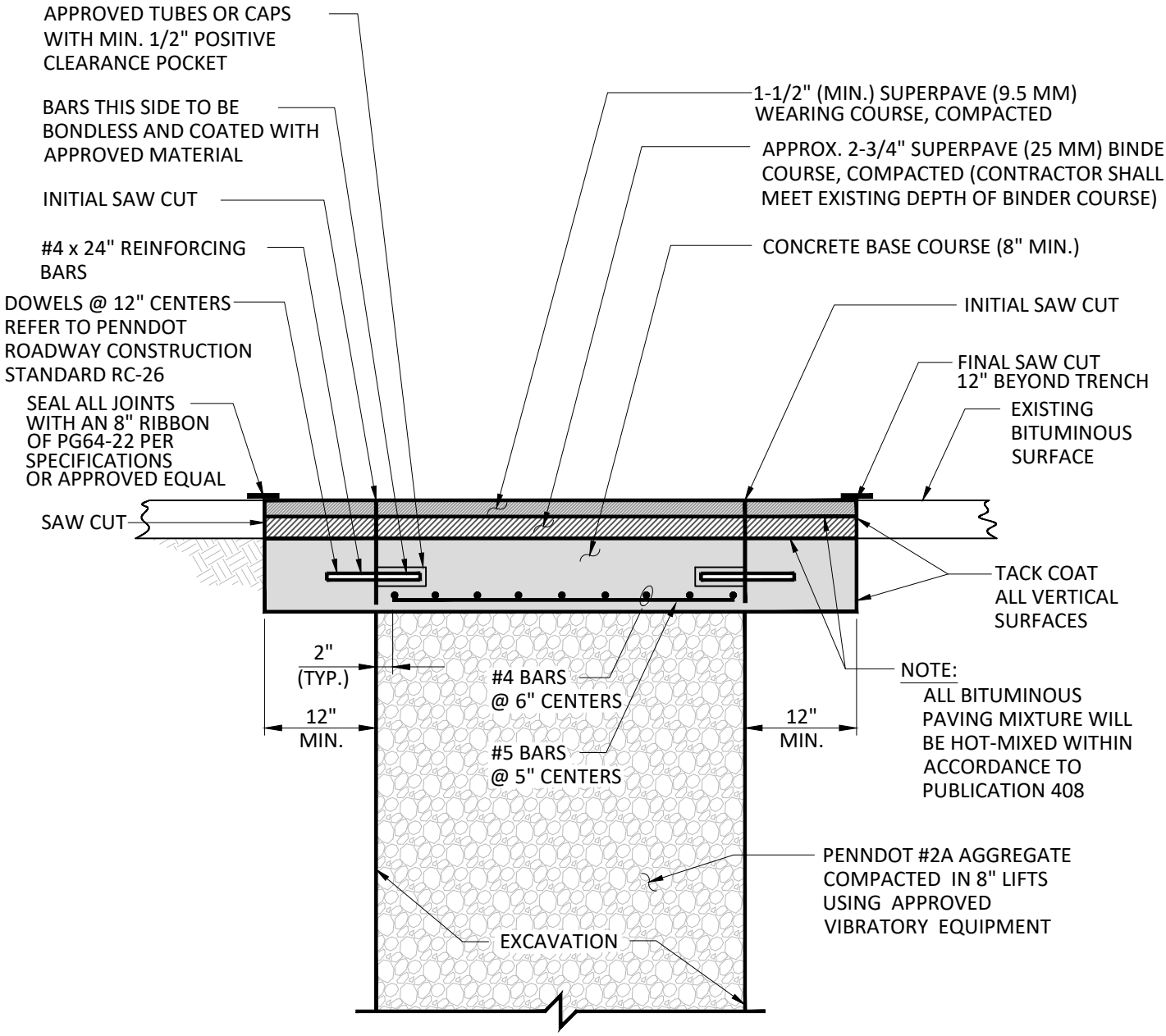
4. FOR DETAIL ON PIPE TRENCHING AND BEDDING, SEE NHT-019.

NORTH HUNTINGDON CONNECTED

STREET OPENING RESTORATION DETAIL

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-020



WEARING COURSE:

SUPERPAVE MATERIAL IN ACCORDANCE WITH SEC. 409 OF PENNDOT PUB. 408. DEPTH EQUAL TO EXISTING, 1-1/2" MIN.

BINDER COURSE:

SUPERPAVE MATERIAL IN ACCORDANCE WITH SEC. 409 OF PENNDOT PUB. 408. DEPTH EQUAL TO EXISTING, APPROX. 2-3/4".

CONCRETE BASE COURSE:

8" MIN. HIGH EARLY STRENGTH CONCRETE.

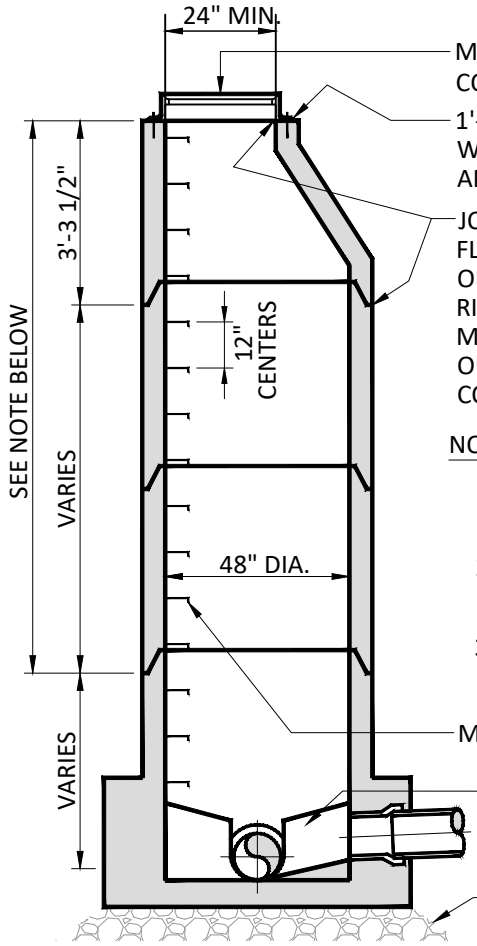
FOR DETAIL ON PIPE TRENCHING AND BEDDING, SEE NHT-019

NORTH HUNTINGDON CONNECTED

STREET OPENING RESTORATION DETAIL (CONCRETE BASE)

KU Resources, Inc. Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-021



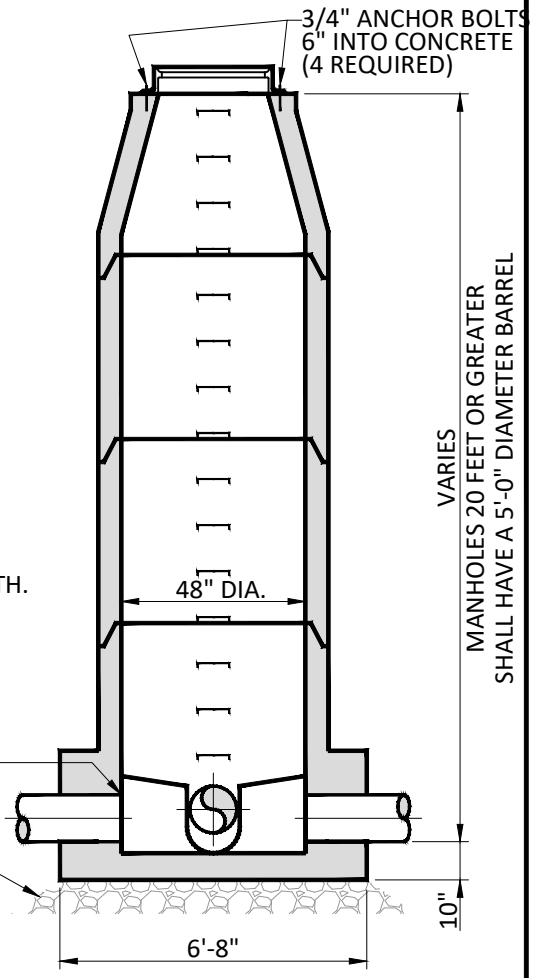
SECTION 2-010-A

NOTES:

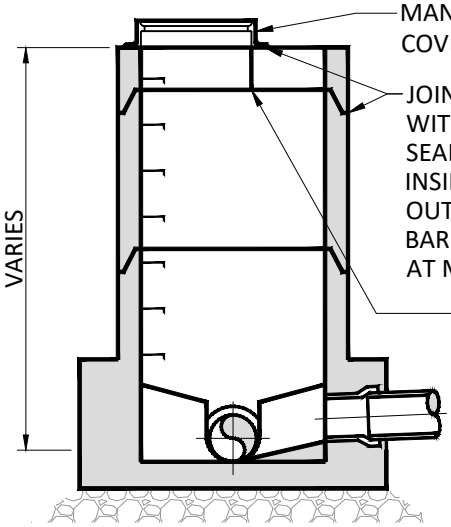
1. PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ASTMC478, LATEST REVISION.
2. LIFTING HOLES SHALL BE POINTED WITH MORTAR, MADE WATERTIGHT & LEFT NEAT & SMOOTH.
3. MANHOLES EXCEEDING DEPTHS OF 20 FEET SHALL HAVE 60 INCH DIAMETER BARREL.

NOTE:

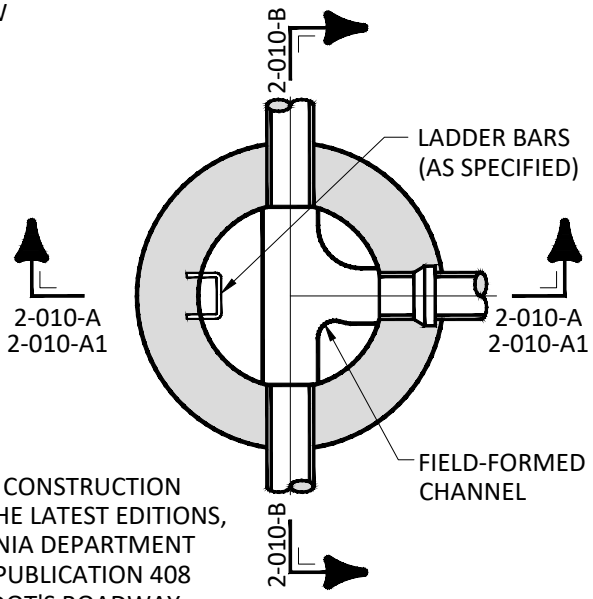
IF THIS DIMENSION IS LESS THAN 5'-0" USE A PRECAST CONCRETE SLAB ON TOP AS SHOWN BELOW



SECTION 2-010-B



SECTION 2-010-A1



PLAN 2-010-C

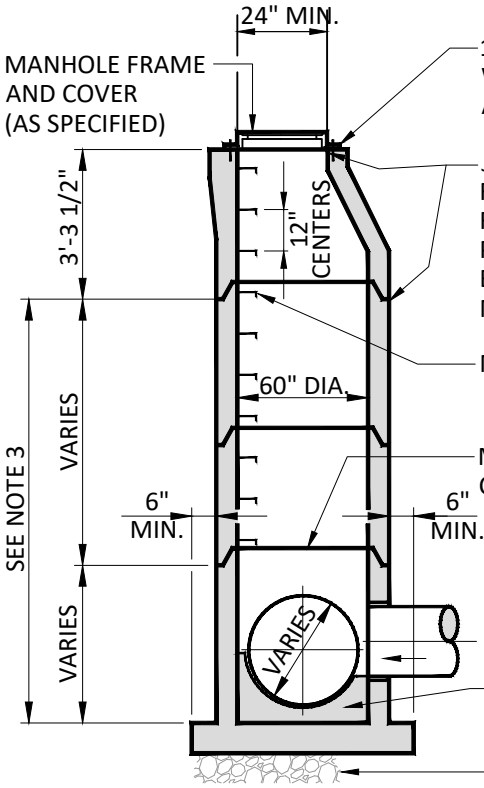
ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS, AS AMENDED, OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PENNDOT) PUBLICATION 408 SPECIFICATION, AS WELL AS PENNDOT'S ROADWAY CONSTRUCTION (RC) STANDARDS.

NORTH HUNTINGDON CONNECTED

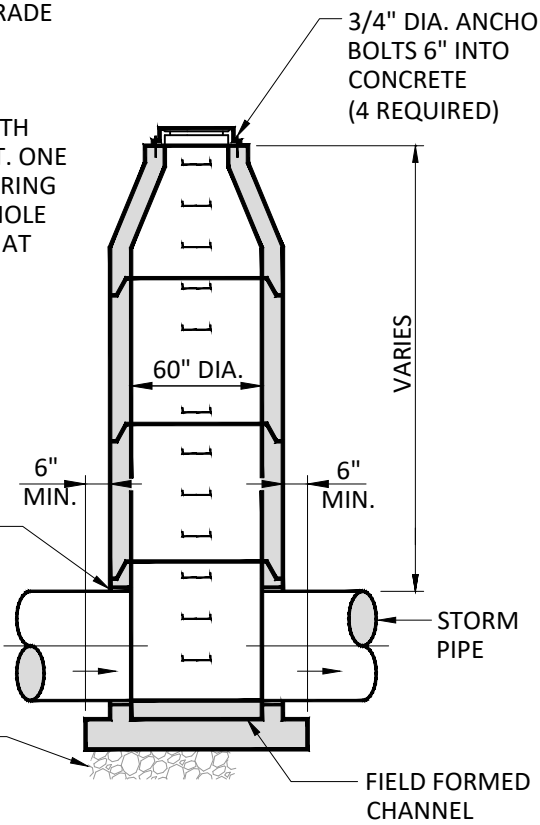
PRECAST CONCRETE MANHOLE (PIPE DIAMETERS: 6" TO 21")

KU Resources, Inc. Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-022

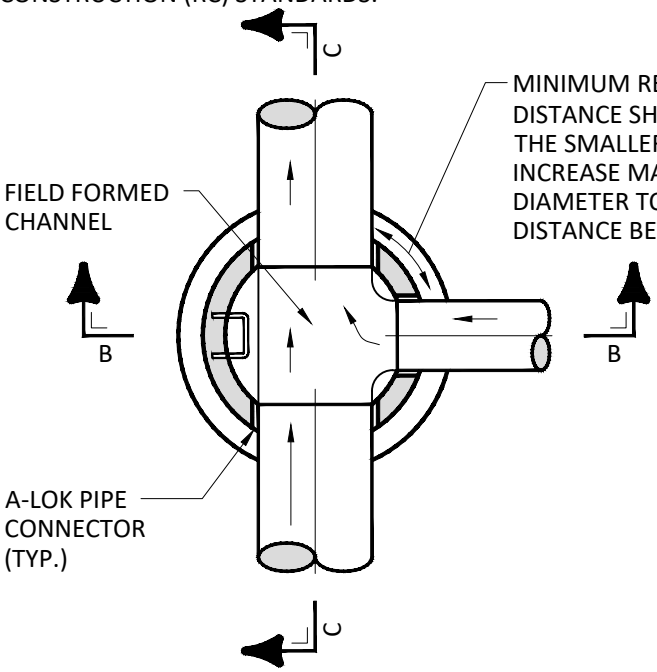


SECTION B



SECTION C

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS, AS AMENDED, OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PENNDOT) PUBLICATION 408 SPECIFICATION, AS WELL AS PENNDOT'S ROADWAY CONSTRUCTION (RC) STANDARDS.



PLAN A

NOTES:

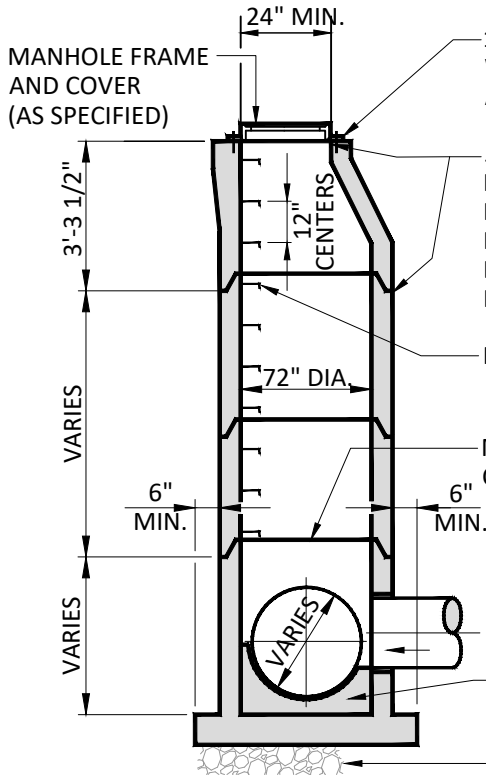
1. PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ASTM C478, LATEST REVISION.
2. WATERPROOF EXTERIOR SURFACE WITH TWO COATS BITUMASTIC MATERIAL OR COAL TAR SOLUTION, 8 MILS PER COAT.
3. DROP CONNECTIONS ARE NOT PERMITTED FOR PIPES LARGER THAN 30" DIA.
4. LIFTING HOLES SHALL BE POINTED WITH MORTAR, MADE WATERTIGHT & LEFT NEAT & SMOOTH
5. FOR DEPTHS LESS THAN 5'-0", INSTALL PRECAST CONCRETE SLAB TOP DESIGNED TO MEET LOAD CONDITIONS. MANHOLE TO BE 60" DIA. FULL DEPTH.

NORTH HUNTINGDON CONNECTED

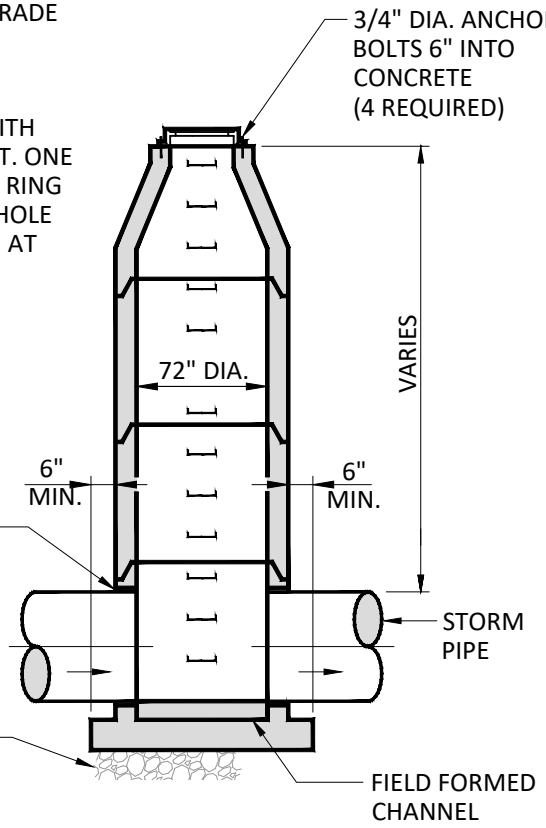
PRECAST CONCRETE MANHOLE (PIPE DIAMETERS: 24" TO 42")

KU Resources, Inc. Innovative Solutions. Outstanding Support.

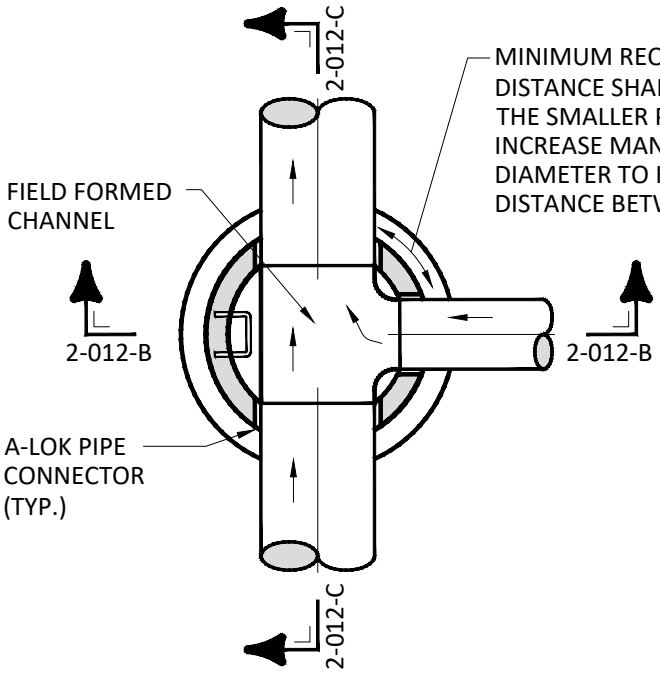
Not to Scale	SEPTEMBER 2020	NHT-023



SECTION 2-012-B



SECTION 2-012-C



PLAN 2-012-A

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS, AS AMENDED, OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PENNDOT) PUBLICATION 408 SPECIFICATION, AS WELL AS PENNDOT'S ROADWAY CONSTRUCTION (RC) STANDARDS.

NOTES:

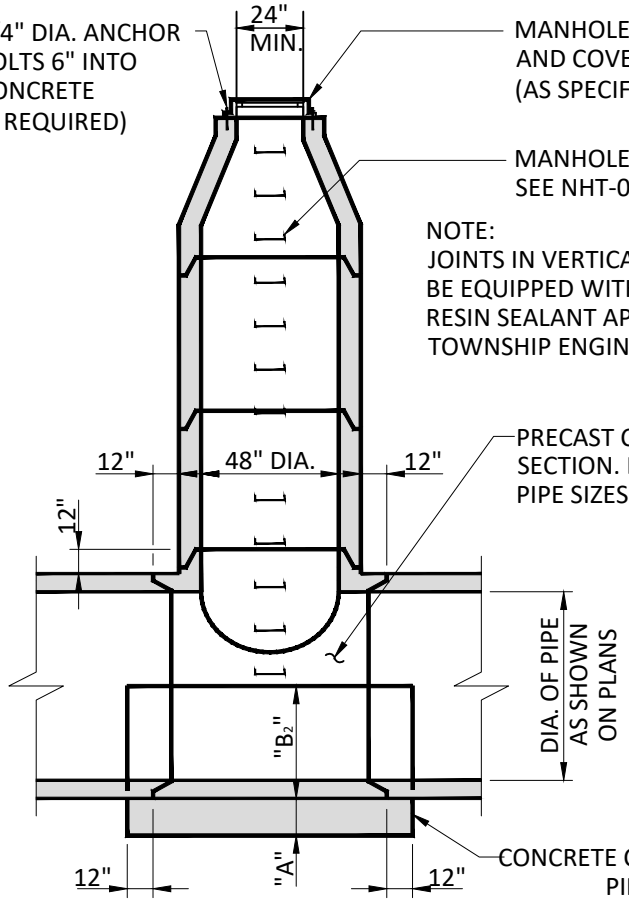
1. PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ASTM C478, LATEST REVISION.
2. WATERPROOF EXTERIOR SURFACE WITH TWO COATS BITUMASTIC MATERIAL OR COAL TAR SOLUTION, 8 MILS PER COAT.
3. DROP CONNECTIONS ARE NOT PERMITTED.
4. LIFTING HOLES SHALL BE POINTED WITH MORTAR, MADE WATERTIGHT & LEFT NEAT & SMOOTH

NORTH HUNTINGDON CONNECTED

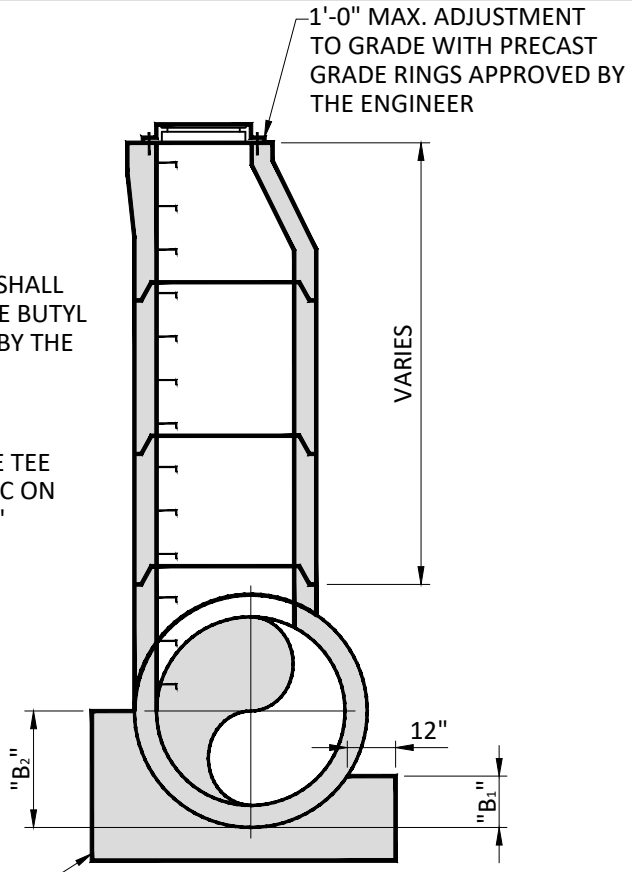
PRECAST CONCRETE MANHOLE, 72" DIAMETER (PIPE DIAMETERS: 48" TO 54")

KU Resources, Inc. Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-024

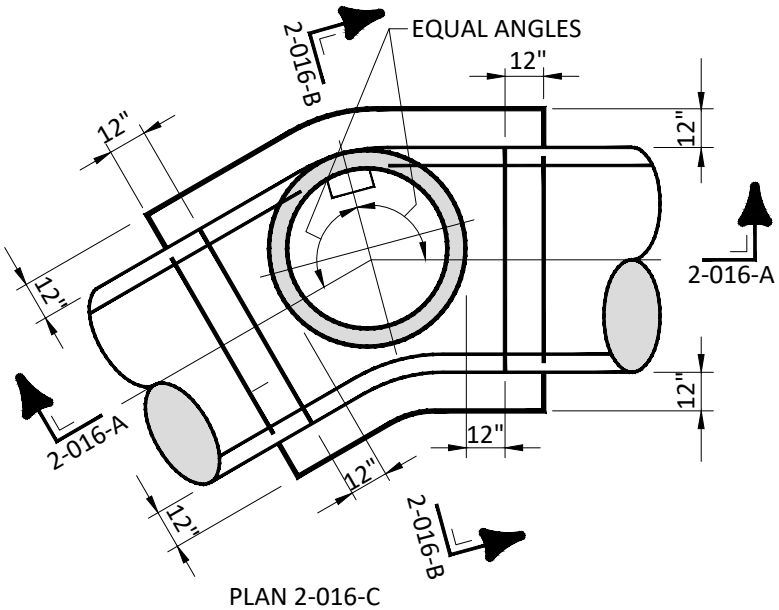


SECTION 2-016-A



SECTION 2-016-B

NOTE:
IF MAIN STORM PIPE IS REQUIRED TO RECEIVE PROTECTIVE COATING, VERTICAL MANHOLE SHAFT SHALL RECEIVE SAME LINING.



PLAN 2-016-C

NOTE:
"A" 1/4 INSIDE DIA.

"B_1" 1/4 OUTSIDE DIA.

"B_2" 1/2 OUTSIDE DIA. OF PIPE GREATER THAN 48" PIPE

"B_2" 1/4 OUTSIDE DIA. ON 48" PIPE

PIPE SCHEDULE ASTM DESIGN

TOP SECTION C-76-57 CLASS 3
VERTICAL SHAFT C-76-57 ALL DEPTHS

0' TO 15'-11" CLASS II
16' TO 30'-11" CLASS III
31' TO 100' CLASS IV
} M.H. DEPTH

BOTTOM SECTION (ECCENTRIC TEE)
C-76-57 CLASS IV ALL DEPTHS

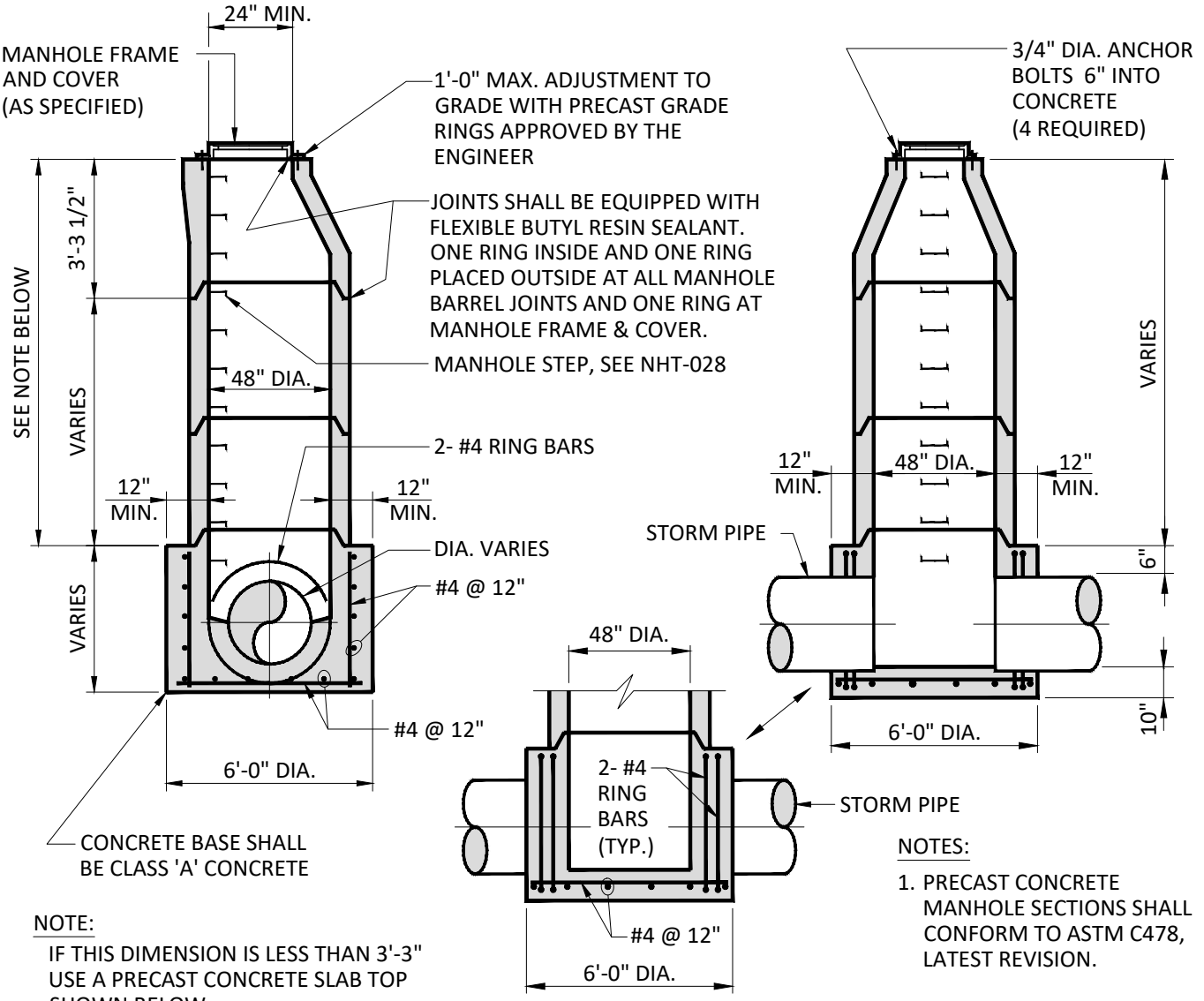
ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS, AS AMENDED, OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PENNDOT) PUBLICATION 408 SPECIFICATION, AS WELL AS PENNDOT'S ROADWAY CONSTRUCTION (RC) STANDARDS.

NORTH HUNTINGDON CONNECTED

ALTERNATE PRECAST CONCRETE MANHOLE (PIPE DIAMETERS: 48" AND LARGER)

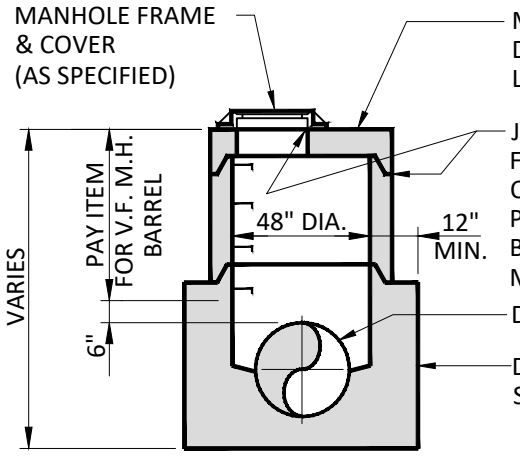
KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-025



NOTE:

IF THIS DIMENSION IS LESS THAN 3'-3" USE A PRECAST CONCRETE SLAB TOP SHOWN BELOW



NOTES:

1. PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ASTM C478, LATEST REVISION.
2. WATERPROOF EXTERIOR SURFACE WITH TWO COATS BITUMASTIC MATERIAL OR COAL TAR SOLUTION. 8 MILS PER COAT.
3. LIFTING HOLES SHALL BE POINTED WITH MORTAR, MADE WATERTIGHT AND LEFT NEAT & SMOOTH

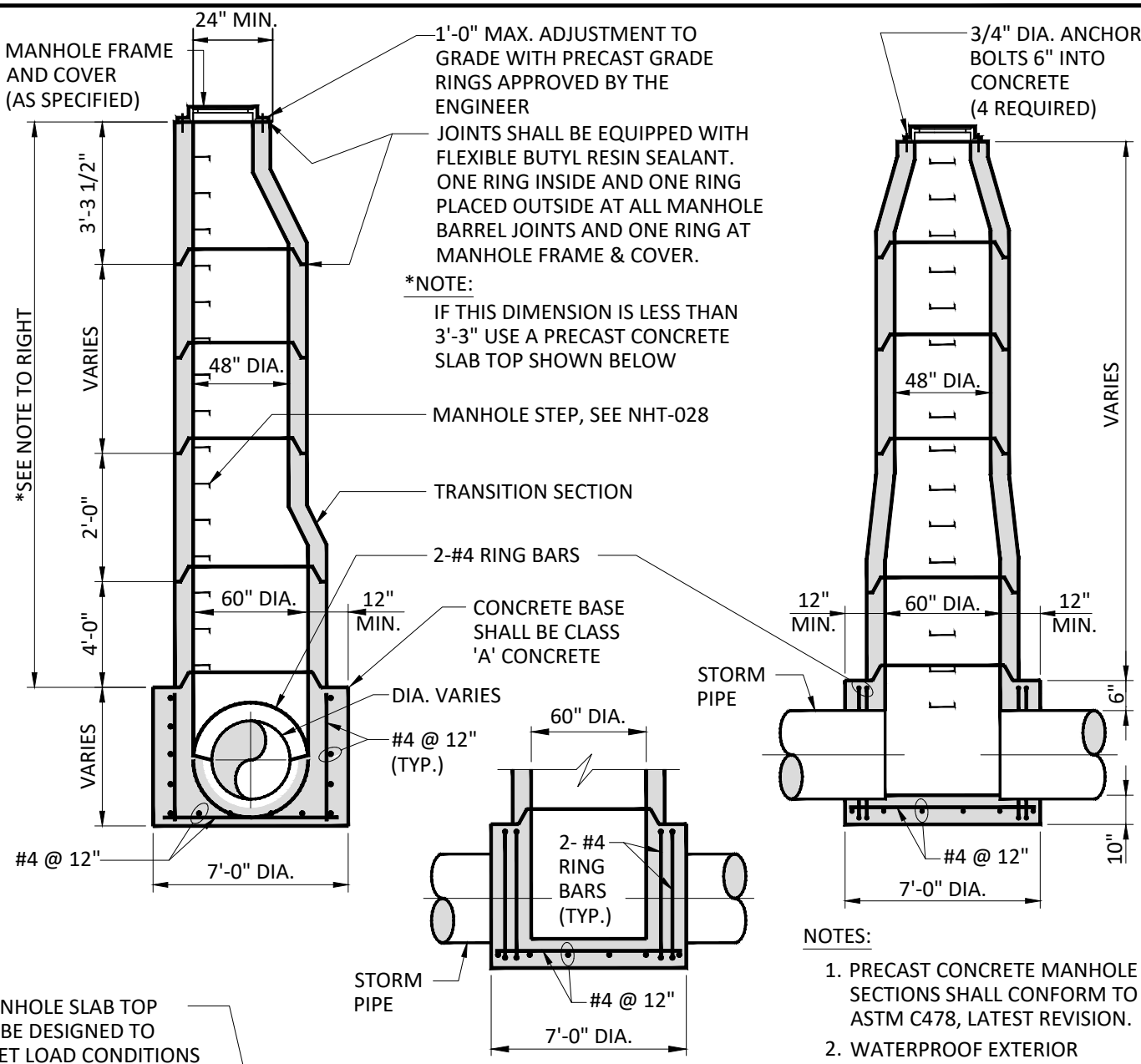
ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS, AS AMENDED, OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PENNDOT) PUBLICATION 408 SPECIFICATION, AS WELL AS PENNDOT'S ROADWAY CONSTRUCTION (RC) STANDARDS.

NORTH HUNTINGDON CONNECTED

PRECAST CONCRETE MANHOLE, CAST-IN-PLACE BOTTOM (PIPE DIAMETERS: 20" TO 33")

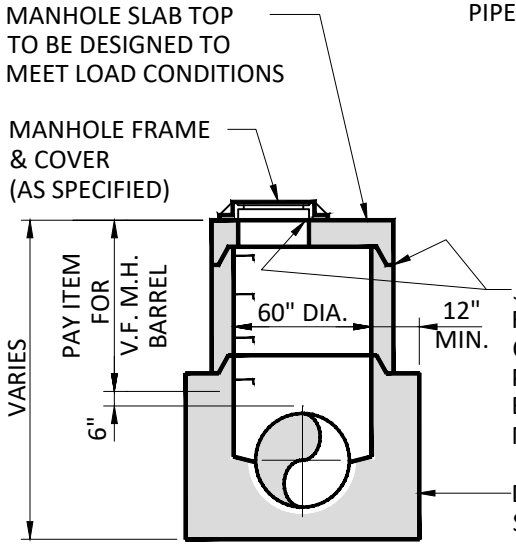
KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale | SEPTEMBER 2020 | NHT-026



NOTES:

1. PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ASTM C478, LATEST REVISION.
2. WATERPROOF EXTERIOR SURFACE WITH TWO COATS BITUMASTIC MATERIAL OR COAL TAR SOLUTION. 8 MILS PER COAT.
3. LIFTING HOLES SHALL BE POINTED WITH MORTAR, MADE WATERTIGHT AND LEFT NEAT & SMOOTH.



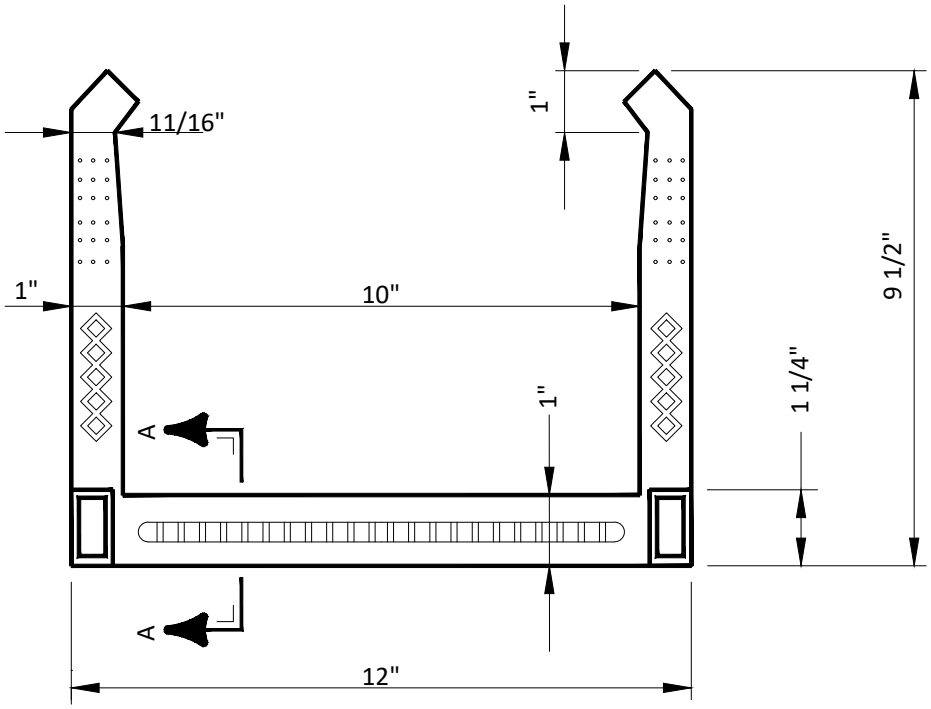
ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS, AS AMENDED, OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PENNDOT) PUBLICATION 408 SPECIFICATION, AS WELL AS PENNDOT'S ROADWAY CONSTRUCTION (RC) STANDARDS.

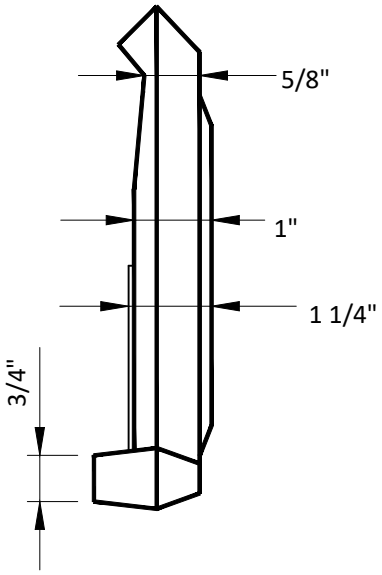
NORTH HUNTINGDON CONNECTED

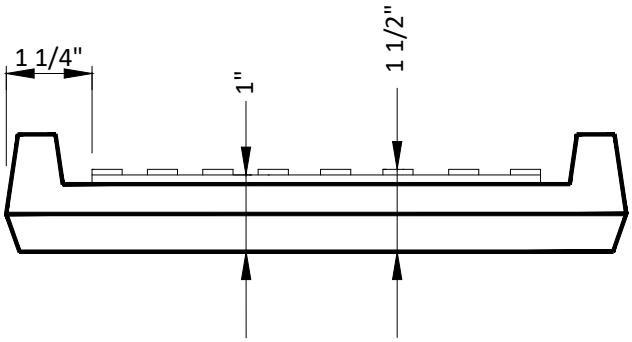
PRECAST CONCRETE MANHOLE, CAST-IN-PLACE BOTTOM (PIPE DIAMETERS: 36" TO 42")

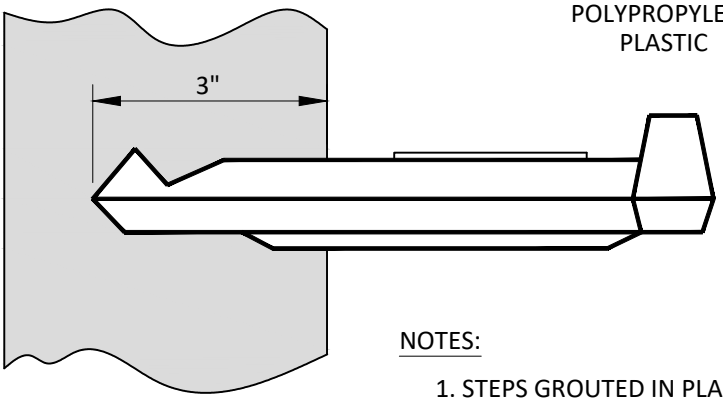
KU Resources, Inc. Innovative Solutions. Outstanding Support.

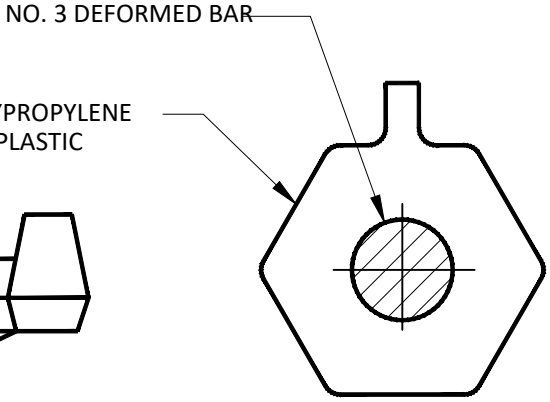
Not to Scale	SEPTEMBER 2020	NHT-027











SECTION A

NOTES:

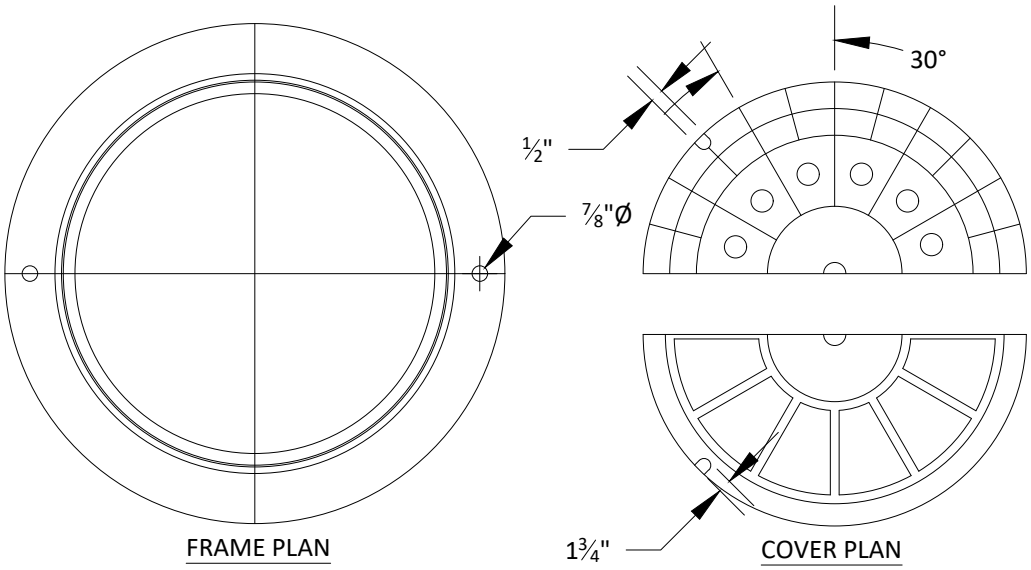
1. STEPS GROUTED IN PLACE
2. INSTALL STEPS ON 12" CENTERS

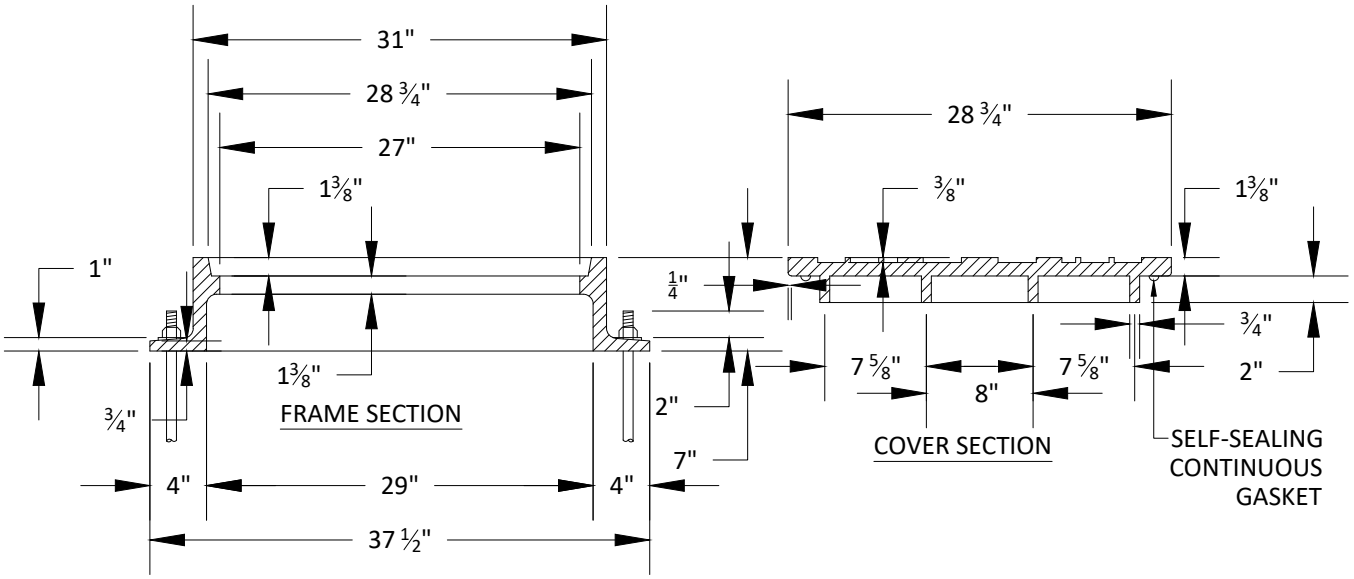
NORTH HUNTINGDON CONNECTED

POLYPROPYLENE PLASTIC MANHOLE STEP

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-028

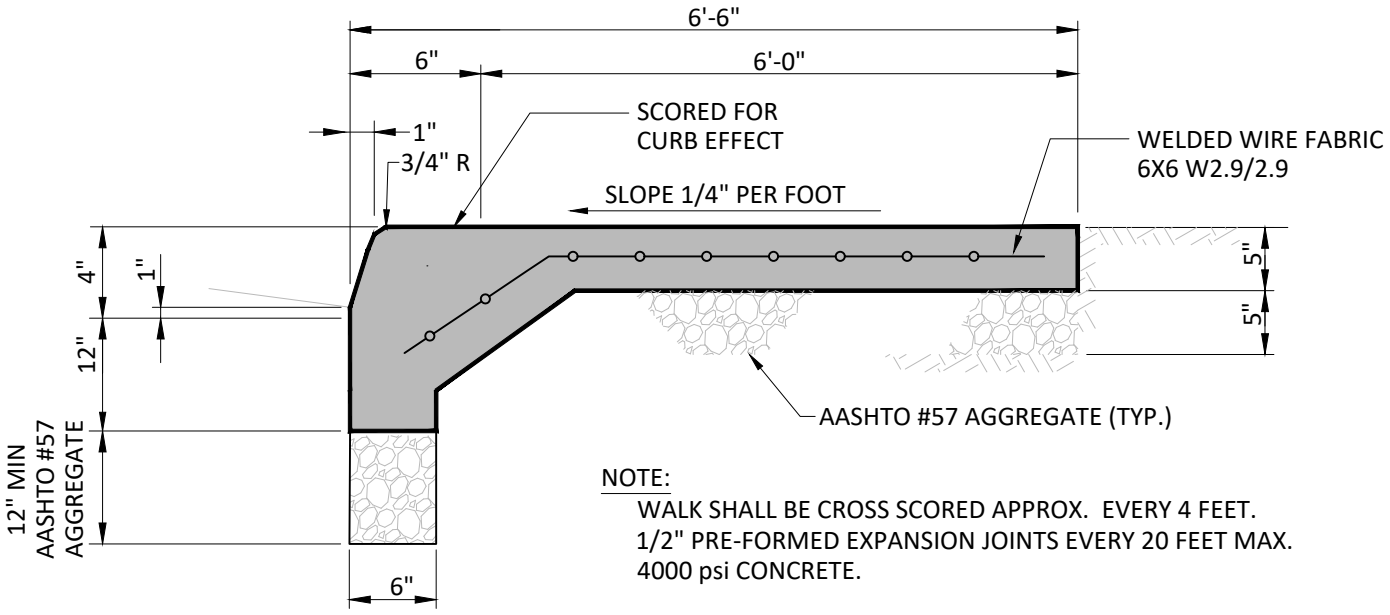




NOTE:
STORM MANHOLE, FRAME & COVER LOCATED IN STREETS SHALL BE NEEHAH FOUNDRY CO. FRAME R-1753-A AND SELF-SEALING SOLID LID OR APPROVED EQUAL.

STORM MANHOLE COVER AND FRAME

NORTH HUNTINGDON CONNECTED	STORM MANHOLE COVER AND FRAME		
KU Resources, Inc. Innovative Solutions. Outstanding Support.	Not to Scale	SEPTEMBER 2020	NHT-029



NOTE:

WALK SHALL BE CROSS SCORED APPROX. EVERY 4 FEET.
1/2" PRE-FORMED EXPANSION JOINTS EVERY 20 FEET MAX.
4000 psi CONCRETE.

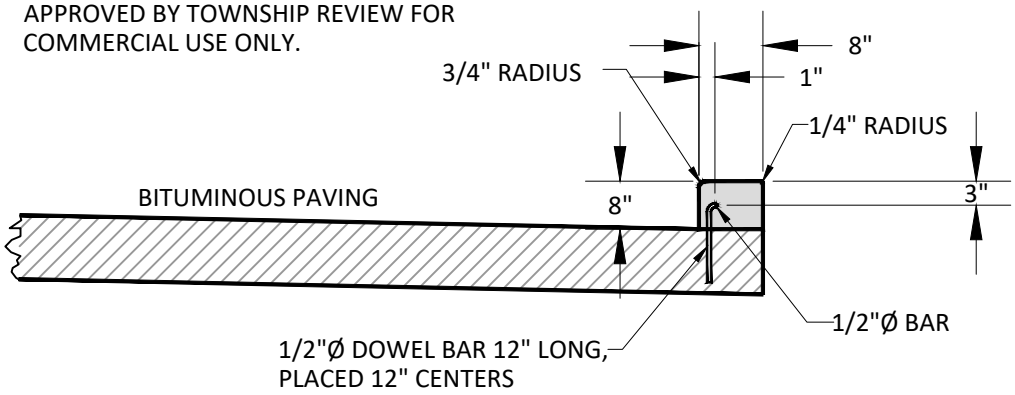
NORTH HUNTINGDON CONNECTED

COMMERCIAL/INDUSTRIAL CONCRETE CURB AND SIDEWALK DETAIL

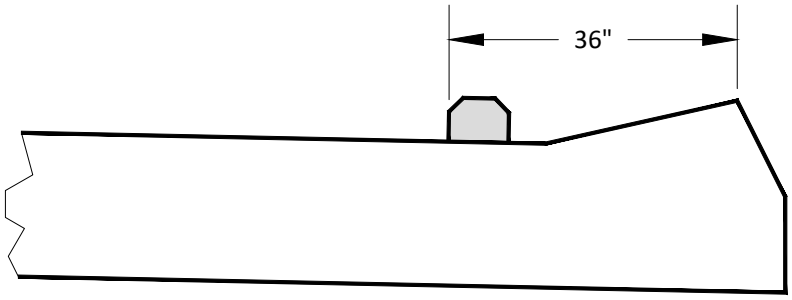
KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-030

NOTE: CONCRETE DECK CURB MAY BE SUBSTITUTED FOR DEEP CURB WHEN APPROVED BY TOWNSHIP REVIEW FOR COMMERCIAL USE ONLY.



CONCRETE DECK CURB



*CURB ONLY REQUIRED IF WITHIN REQUIREMENTS OF STORMWATER MANAGEMENT REPORT

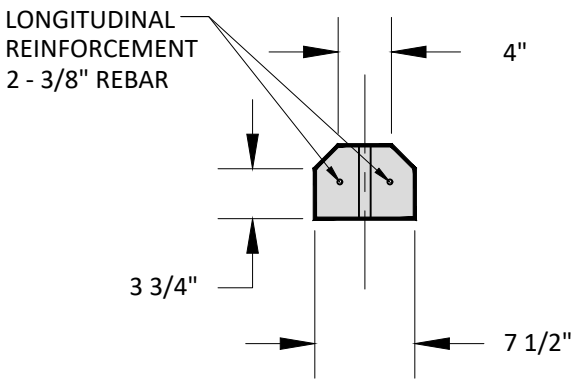
WEDGE CURB WITH WHEEL STOP

NORTH HUNTINGDON CONNECTED

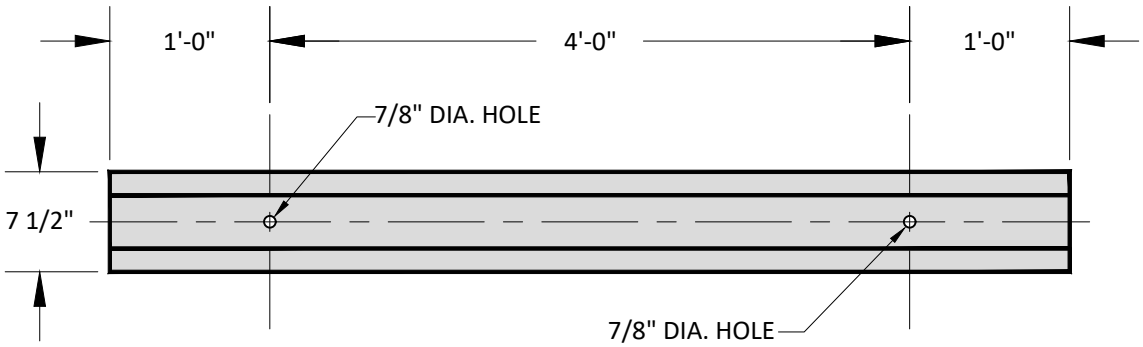
COMMERCIAL USE CONCRETE DECK CURB & WEDGE CURB WITH WHEEL STOP

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

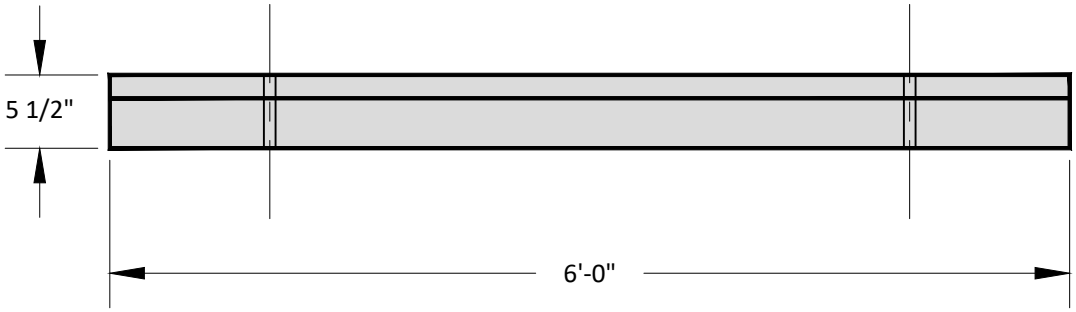
Not to Scale	SEPTEMBER 2020	NHT-031



ENDVIEW



PLAN VIEW



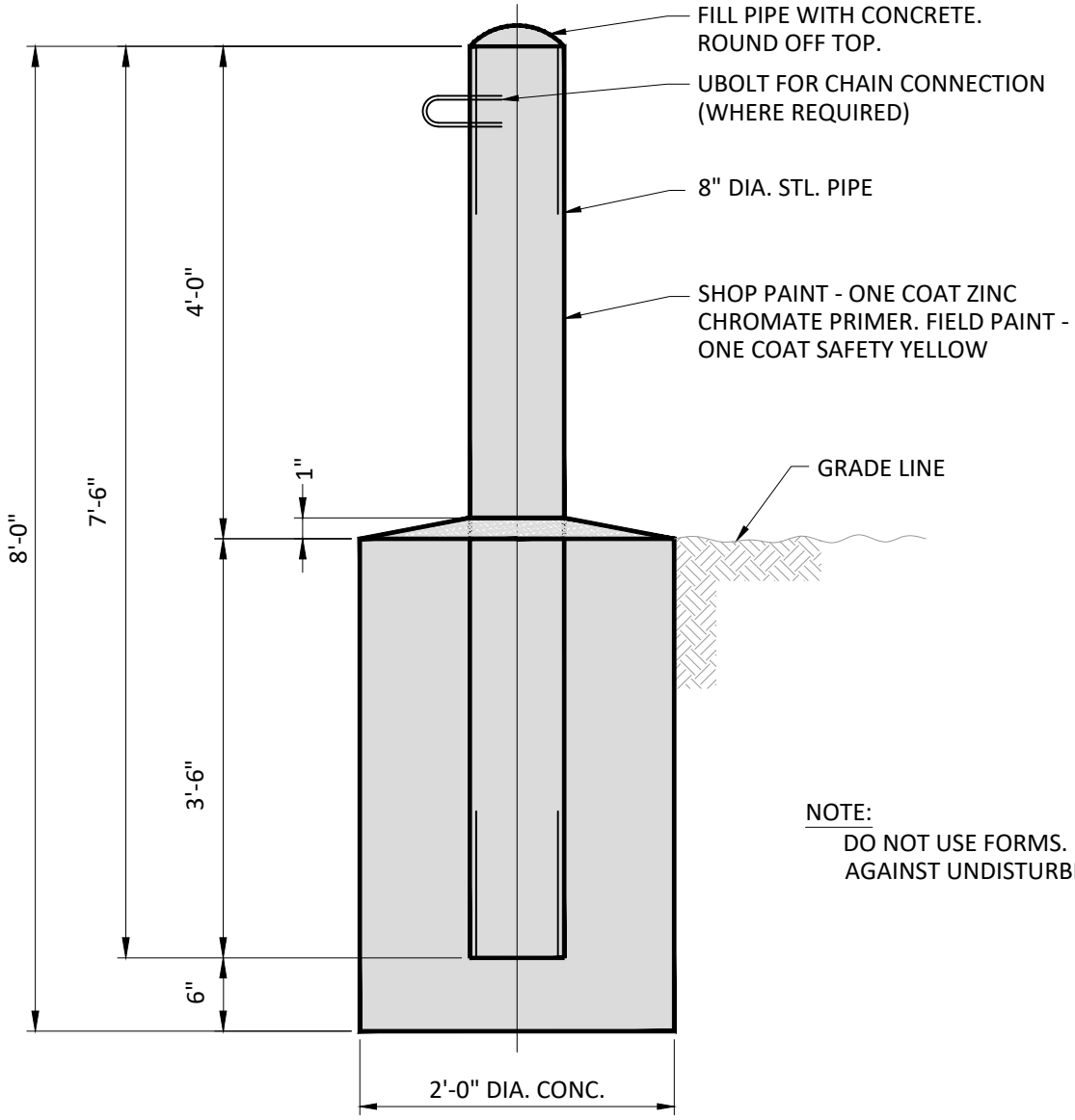
ELEVATION

NOTE: RUBBERIZED CURB MAY BE SUBSTITUTED FOR
CONCRETE AT THE DISCRETION OF THE TOWNSHIP ENGINEER.

NORTH HUNTINGDON CONNECTED

REINFORCED CONCRETE WHEEL STOP

KU Resources, Inc. Innovative Solutions. Outstanding Support.	Not to Scale	SEPTEMBER 2020	NHT-032



NOTE:
DO NOT USE FORMS. POUR AGAINST UNDISTURBED EARTH.

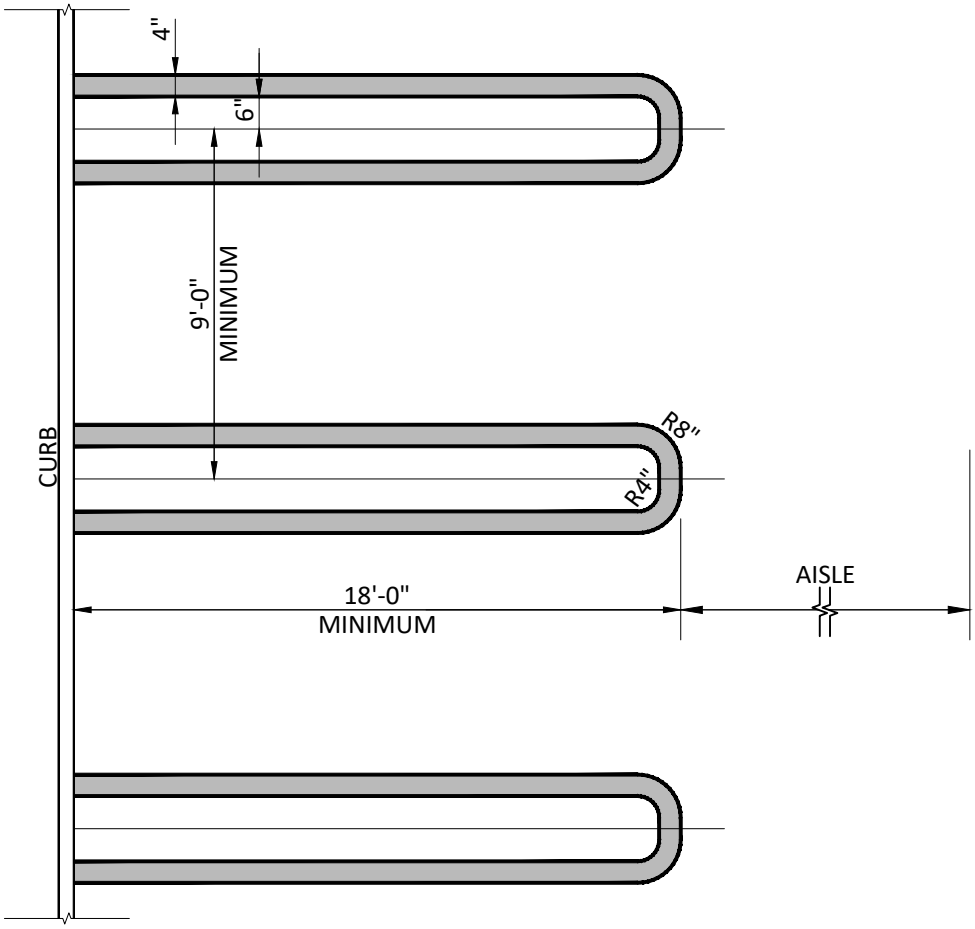
NORTH HUNTINGDON CONNECTED

BOLLARD DETAIL

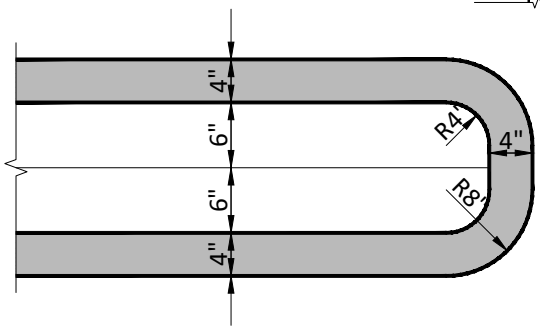
KU Resources, Inc. Innovative Solutions. Outstanding Support.	Not to Scale	SEPTEMBER 2020	NHT-033

REQUIRED AISLE

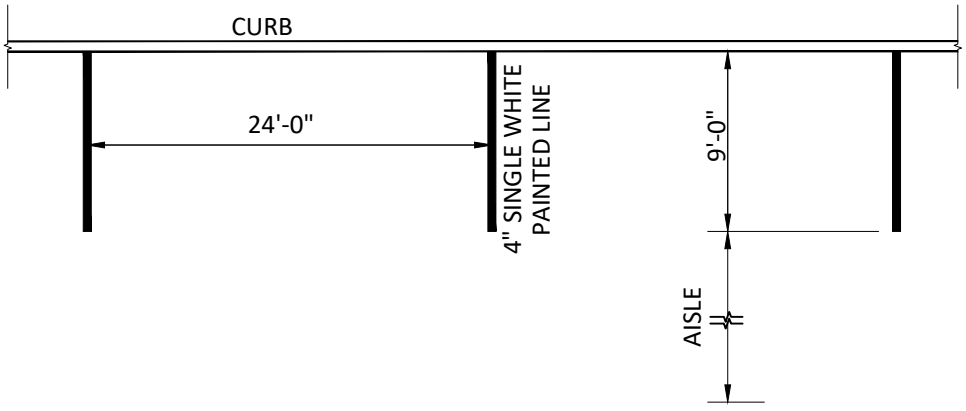
ONE WAY TRAFFIC	15'-0"
TWO WAY TRAFFIC	24'-0"



PERPENDICULAR PARKING SPACE



STANDARD PAINTED LINE DETAIL



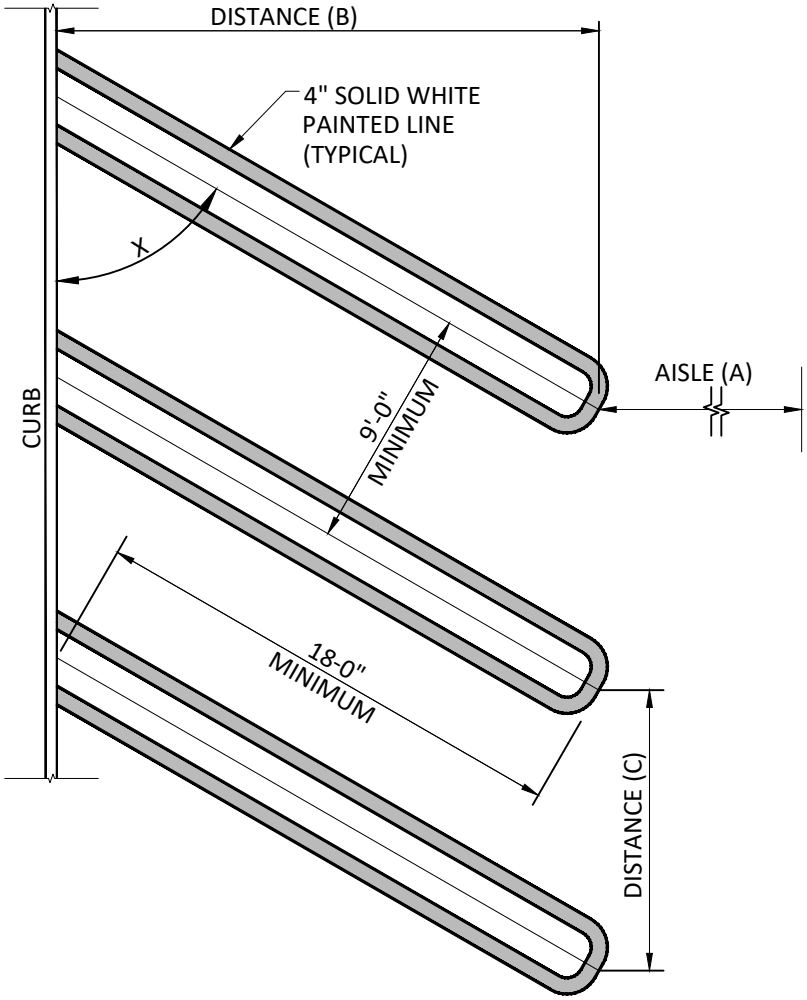
PARALLEL PARKING SPACE

NORTH HUNTINGDON CONNECTED

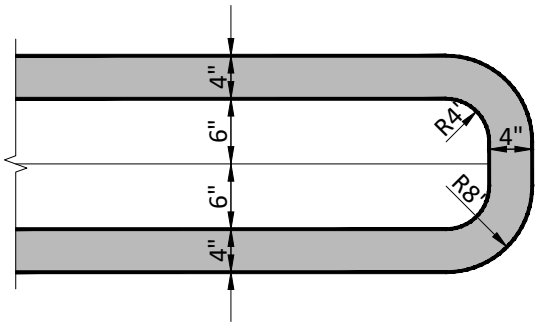
TYPICAL PARKING SPACE DETAILS

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-034



ANGLE PARKING SPACE



STANDARD PAINTED LINE DETAIL

MINIMUM DISTANCES FOR PARKING STALLS

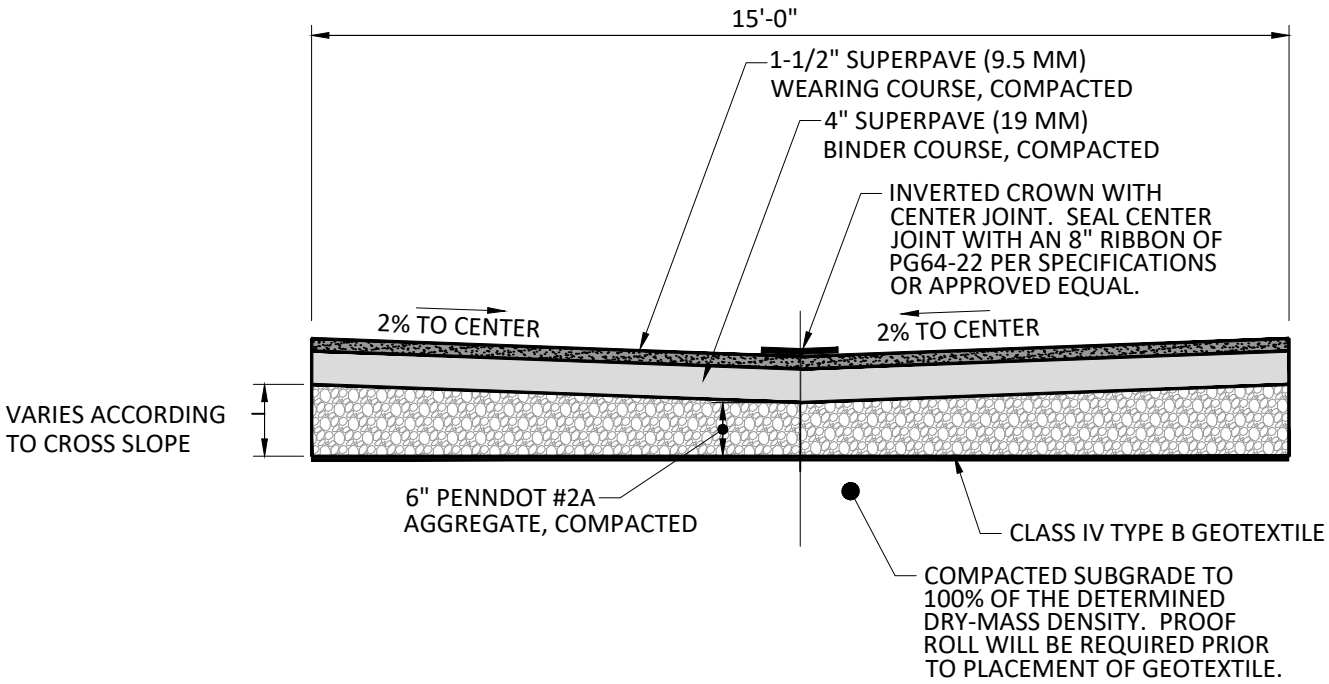
PARKING ANGLE (X)	2 WAY AISLE (A)	1 WAY AISLE (A)	DISTANCE (B)	DISTANCE (C)
30°	24'	12'	16'-9 1/2"	18'-0"
45°	24'	12'	19'-1"	12'-8 3/4"
60°	24'	15'	20'-1"	10'-4 3/4"
90°	24'	15'	18'	9'

NORTH HUNTINGDON CONNECTED

TYPICAL ANGLED PARKING SPACE DETAILS

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-035

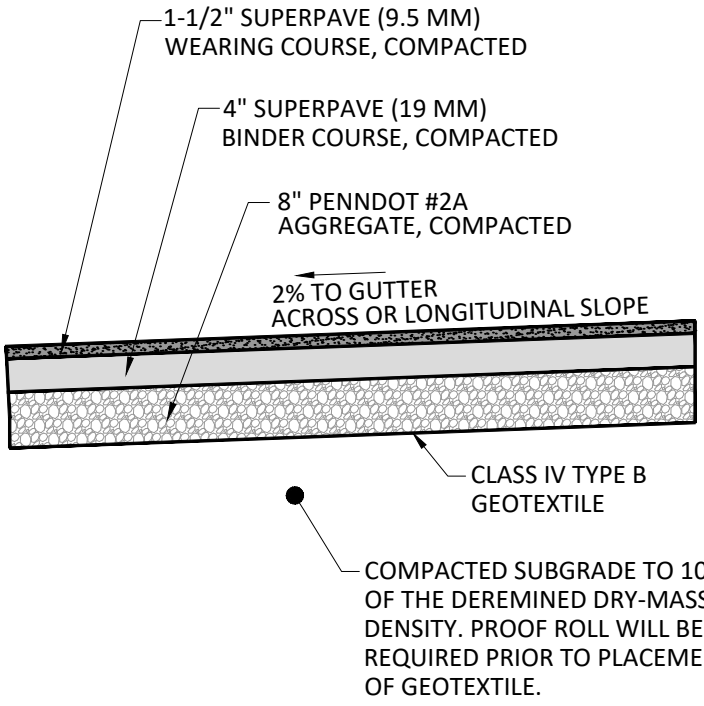


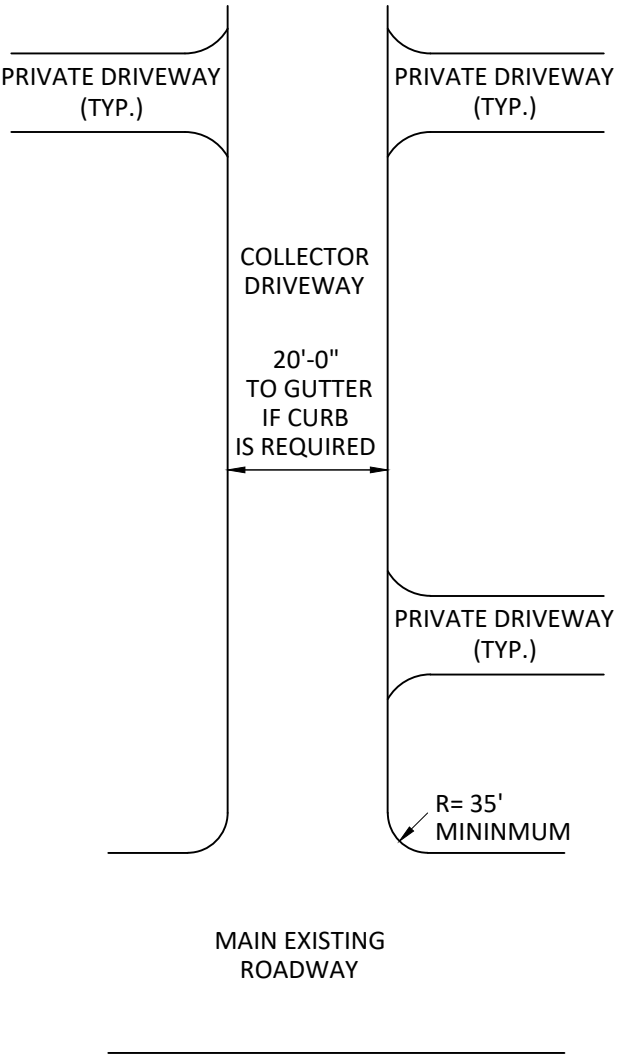
NOTES:
- CARTWAY WIDTH OF 15' SHALL BE FOR ONE-WAY TRAFFIC; 20' FOR TWO-WAY TRAFFIC.

- IF REQUIRED, THE ASPHALT THICKNESS MAY BE REPLACED BY A VARYING THICKNESS AVERAGING 3" OF FB-3 PUG-MILL MIXED ASPHALT

- STORM INLETS SHALL BE PLACED IN THE LOW POINT OF THE INVERTED CURVE WHERE REQUIRED.

NORTH HUNTINGDON CONNECTED	**ALLEY PAVING DETAIL**		
KU Resources, Inc. Innovative Solutions, Outstanding Support.	**Not to Scale**	**SEPTEMBER 2020**	**NHT-036**





NOTES:
- REFERENCE "DRIVEWAY SIGHT DISTANCE DETAIL"

- REFERENCE "RESIDENTIAL AND MINIMUM USE DRIVEWAY GRADE REQUIREMENTS DETAIL"

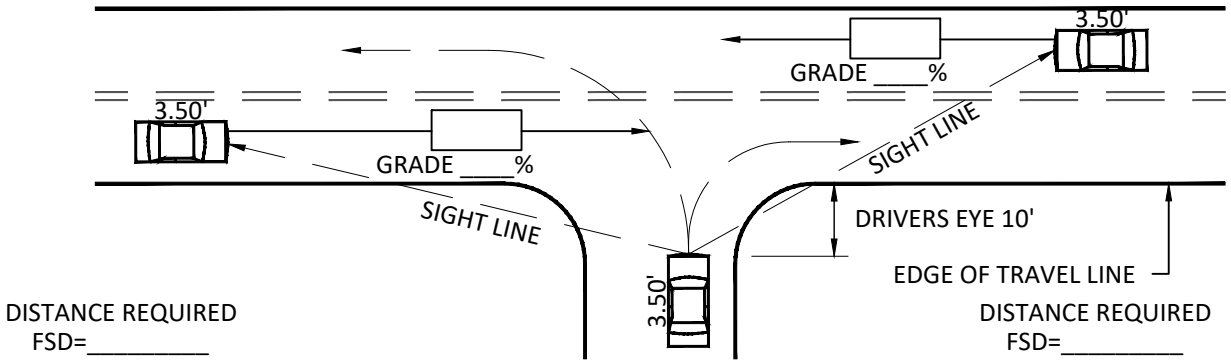
- CLEAR SIGHT TRIANGLE (MAIN TO COLLECTOR) 200'/ 25'

NORTH HUNTINGDON CONNECTED

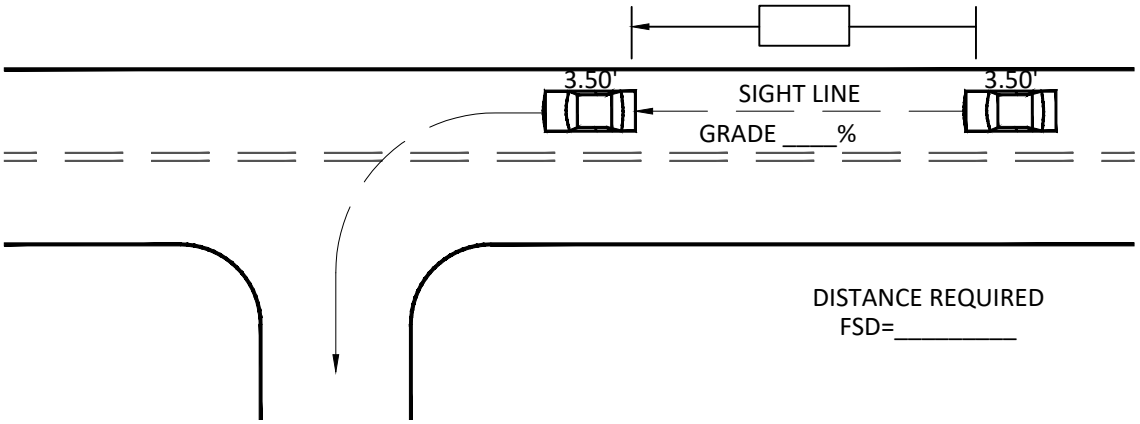
COLLECTOR DRIVEWAY DETAIL

KU Resources, Inc.
Innovative Solutions, Outstanding Support.

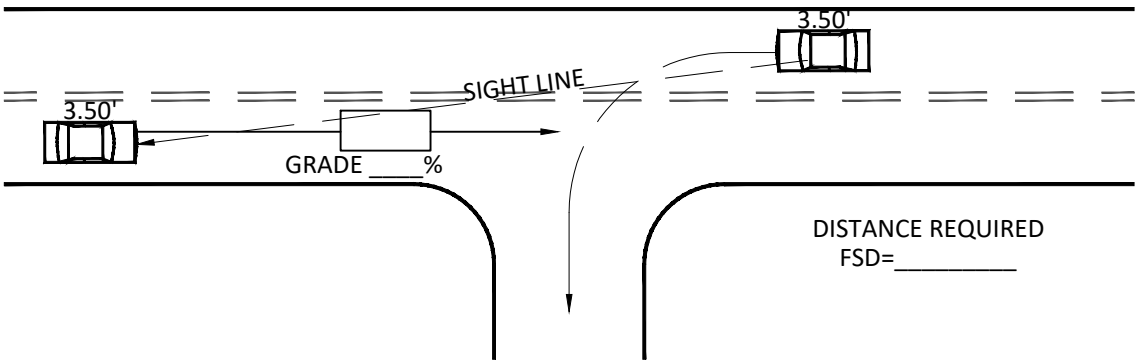
Not to Scale	SEPTEMBER 2020	NHT-037



THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER AT A DRIVEWAY LOCATION CAN CONTINUOUSLY SEE ANOTHER VEHICLE APPROACHING ON THE ROADWAY.



THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER ON THE ROADWAY CAN CONTINUOUSLY SEE THE REAR OF A VEHICLE WHICH IS LOCATED IN THE DRIVERS TRAVEL LANE AND WHICH IS POSITIONED TO MAKE A LEFT TURN INTO A DRIVEWAY.



THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER OF A VEHICLE INTENDING TO MAKE A LEFT TURN INTO A DRIVEWAY CAN CONTINUOUSLY SEE A VEHICLE APPROACHING FROM THE OPPOSITE DIRECTION.

NORTH HUNTINGDON CONNECTED

DRIVEWAY SIGHT DISTANCE DIAGRAM

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-038

SPEED (V) (MPH)	AVERAGE GRADE (G) (PERCENT)										
	USE POSITIVE GRADES WHEN APPROACHING VEHICLE IS TRAVELING UP GRADE.										
	0.0	+1.0	+2.0	+3.0	+4.0	+5.0	+6.0	+7.0	+8.0	+9.0	+10.0
25	147	145	144	143	142	140	139	138	137	136	135
30	196	194	191	189	187	185	183	182	180	178	177
35	249	245	242	239	236	233	231	228	226	224	221
40	314	309	304	299	295	291	287	284	280	277	274
45	383	376	370	364	358	353	348	343	339	334	330
50	462	453	444	436	429	422	415	409	403	397	392
55	538	527	517	508	499	490	482	475	468	461	454

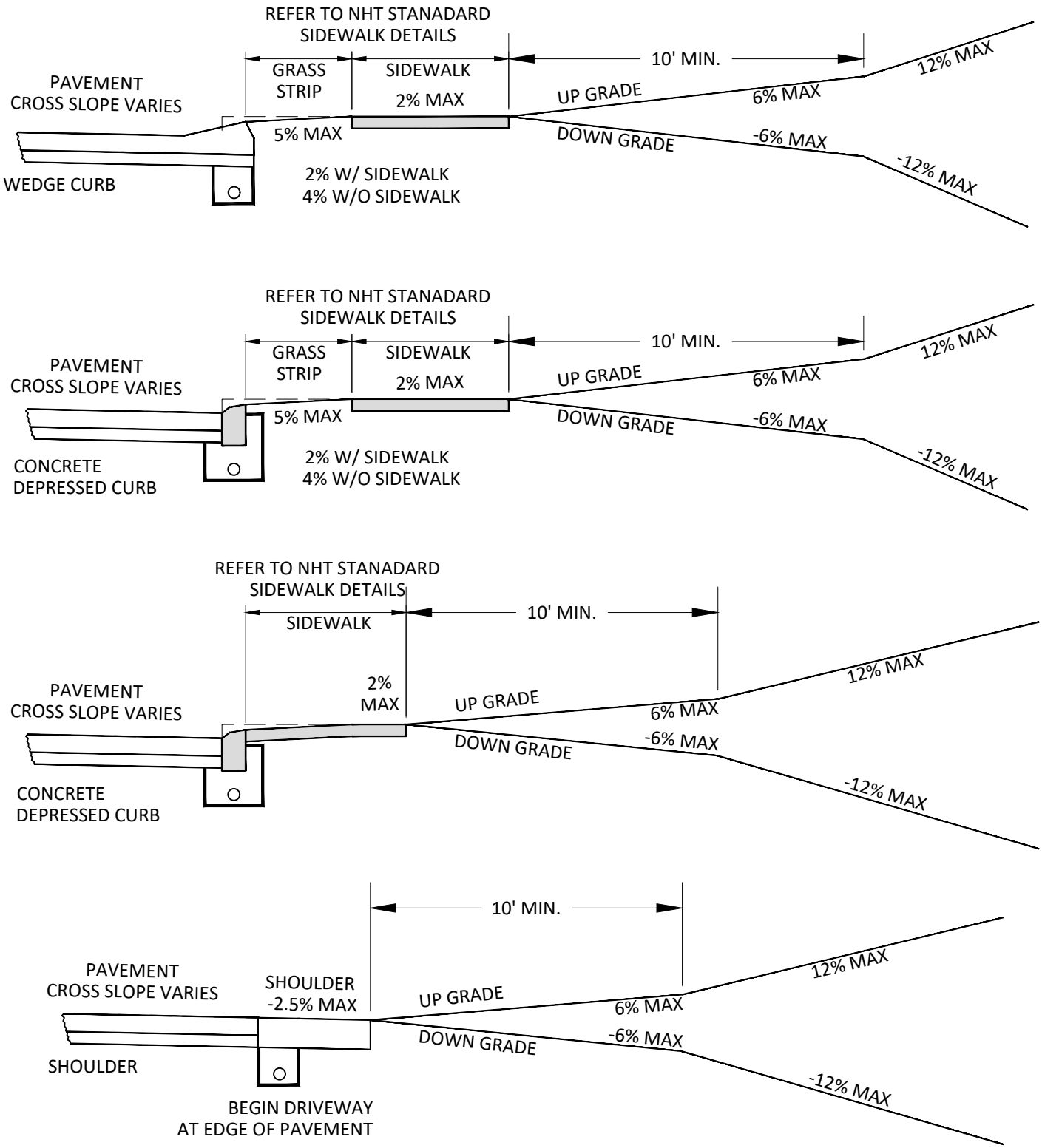
SPEED (V) (MPH)	AVERAGE GRADE (G) (PERCENT)										
	USE NEGATIVE GRADES WHEN APPROACHING VEHICLE IS TRAVELING DOWN GRADE.										
	0.0	-1.0	-2.0	-3.0	-4.0	-5.0	-6.0	-7.0	-8.0	-9.0	-10.0
25	147	148	150	151	153	155	157	159	161	164	166
30	196	199	201	204	207	210	214	217	221	226	230
35	249	252	256	260	265	269	275	280	286	292	299
40	314	319	325	331	338	345	352	360	369	379	389
45	383	390	398	406	415	425	435	447	459	472	487
50	462	471	481	492	504	517	531	546	563	581	600
55	538	550	562	576	590	606	622	641	661	682	706

NORTH HUNTINGDON CONNECTED

FORMULA SIGHT DISTANCE TABLES

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-039



NOTES:

1. MAXIMUM GRADE CHANGE SHALL BE LIMITED TO ± 15% FOR ALL DRIVEWAYS. 12% MAXIMUM GRADE DOES NOT APPLY TO SINGLE FAMILY RESIDENTIAL DRIVEWAYS.
2. FOR DRIVEWAY CROSSINGS, DEFER TO PENNDOT RC-67M DETAILS.

NORTH HUNTINGDON CONNECTED

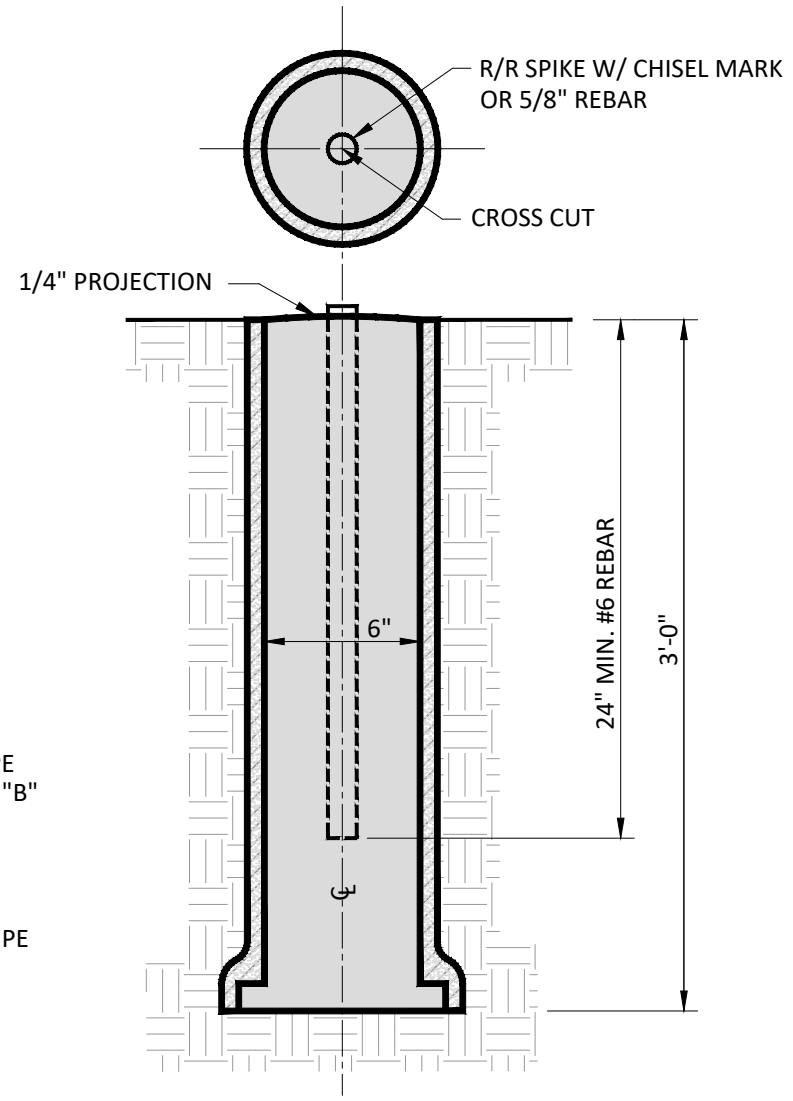
RESIDENTIAL AND MINIMUM USE DRIVEWAY GRADE REQUIREMENTS

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-040


NORTH
HUNTINGDON
CONNECTED


NORTH
HUNTINGDON
CONNECTED



NOTE:

- 6" CLAY OR CONCRETE PIPE TO BE FILLED WITH CLASS "B" CONCRETE.
- PRECAST CONCRETE MONUMENTS MAY BE SUBSTITUTED FOR CLAY PIPE WHEN APPROVED BY TOWNSHIP ENGINEER.

* MONUMENTS TO BE INSTALLED IN SUBDIVISIONS AT DESIGNATED LOCATIONS ON THE APPROVED PLAN OR WITHIN THE STREET RIGHT OF WAY 1'-0" OFF THE RIGHT OF WAY LINE.

** ALTERNATE MONUMENT DESIGNS MAY BE APPROVED BY TOWNSHIP ENGINEER (PRIOR TO INSTALLATION)

NORTH HUNTINGDON CONNECTED

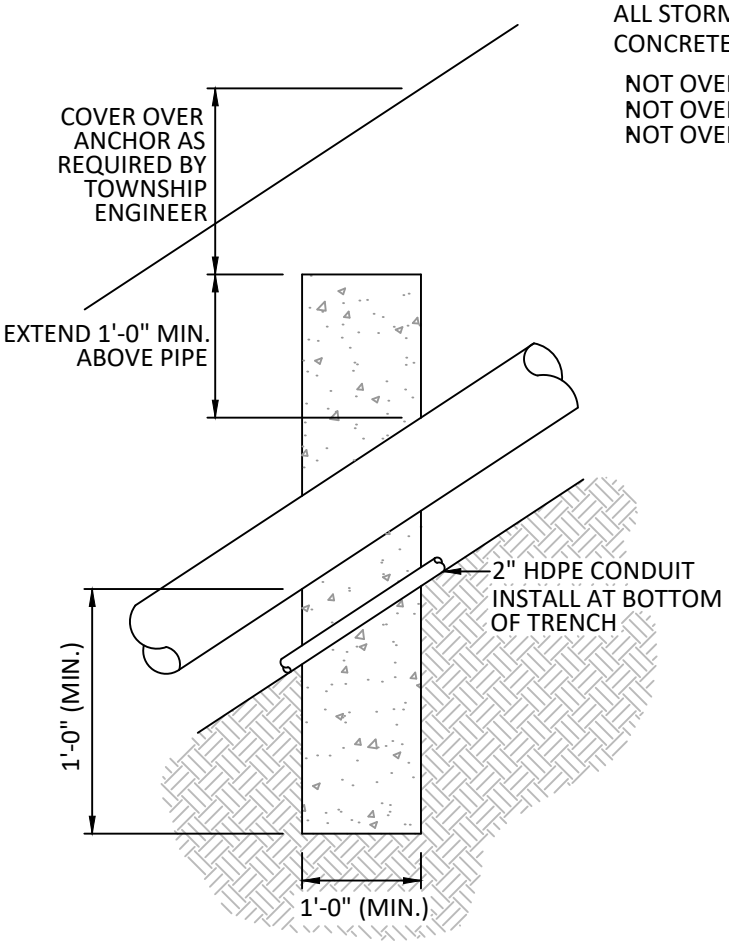
SURVEY MONUMENT DETAIL

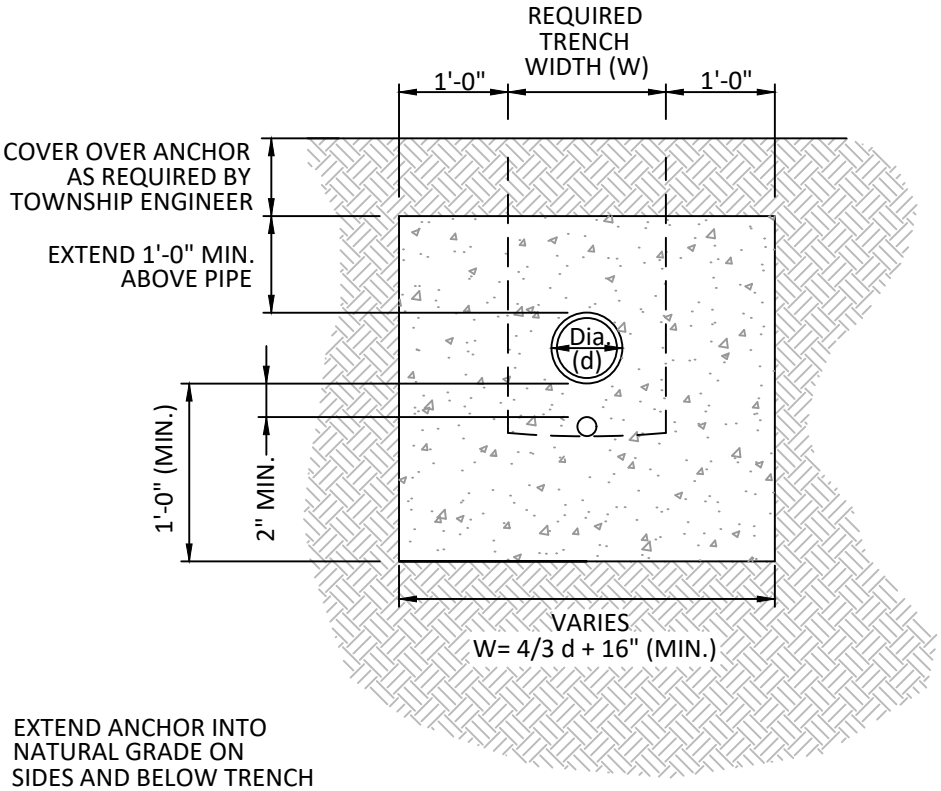
KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-043

ALL STORM PIPES ON 20% SLOPE OR GREATER SHALL HAVE CONCRETE ANCHORS, SPACED AS FOLLOWS:

NOT OVER 36 FEET CENTER TO CENTER ON GRADES 20% AND UP TO 35%
NOT OVER 24 FEET CENTER TO CENTER ON GRADES 35% AND UP TO 50%
NOT OVER 16 FEET CENTER TO CENTER ON GRADES 50% AND OVER





EXTEND ANCHOR INTO NATURAL GRADE ON SIDES AND BELOW TRENCH

NORTH HUNTINGDON CONNECTED

CONCRETE ANCHORS FOR STORM PIPES

KU Resources, Inc.
Innovative Solutions. Outstanding Support.

Not to Scale	SEPTEMBER 2020	NHT-044