

UNDERDRAIN GRADES SHALL NOT BE LESS THAN 0.30% AND THE PIPE SHALL BE DISCHARGED INTO

3. IF UNDERDRAIN DISCHARGES INTO STORM STRUCTURE, THE UNDERDRAIN INLET INVERT SHALL BE 6"

TYPICAL PIPE UNDERDRAIN DETAIL

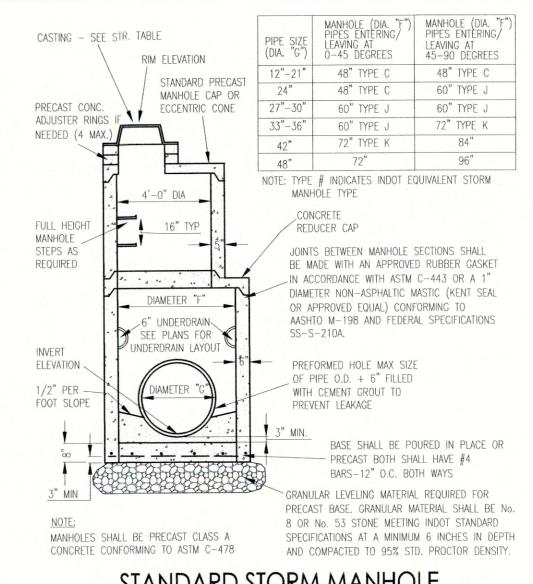
NOT TO SCALE

4. ALL MATERIAL (AGGREGATE, UNDERDRAIN, GEOTEXTILES, ETC.) SHALL MEET INDOT STANDARD

5. FOR ADDITIONAL INSTALLATION PROCEDURES, SEE INDOT STANDRAD SPECIFICATIONS.

STORM STRUCTURES OR OTHER APPROVED LOCATIONS.

ABOVE THE OUTLET PIPES INVERT.



STANDARD STORM MANHOLE

1.25 Bc + 12" MIN.

REGULAR BACKFILL

#8 CRUSHED STONE

NOT TO SCALE

EDGE OF PAVEMENT, CURB,

GUTTER OR SIMILAR STRUCTURE

Bc = OUTSIDE DIAMETER

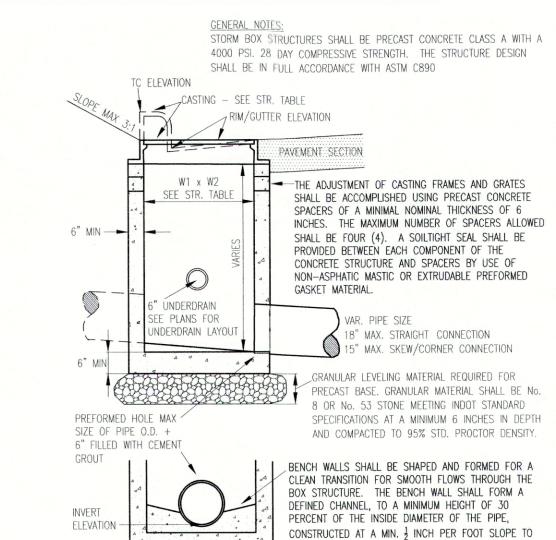
d = DEPTH OF BEDDING

ALL BEDDING AND INITIAL BACKFILL

SHALL BE INSTALLED IN 6" BALANCED

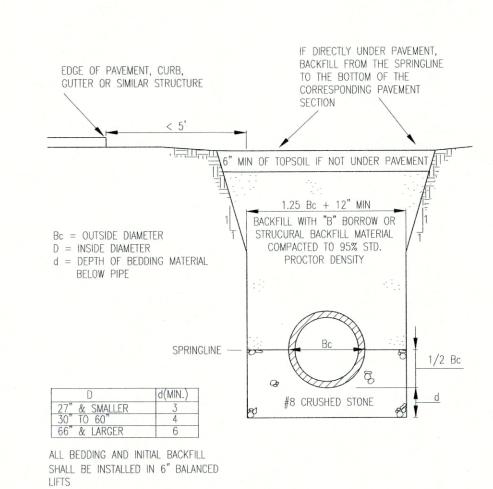
MATERIAL BELOW PIPE

D = INSIDE DIAMETER



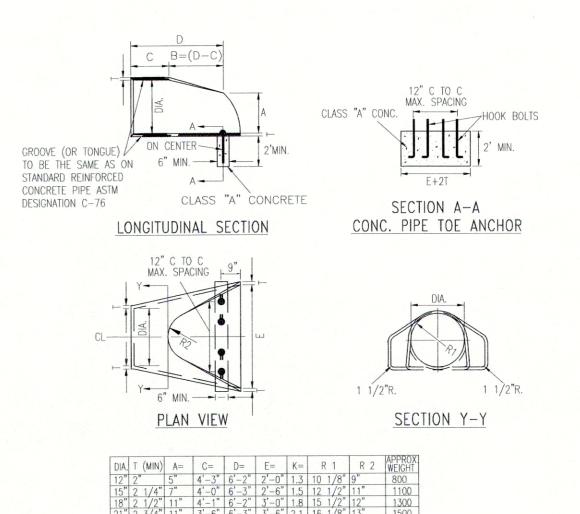
STORM BOX STRUCTURE

NOT TO SCALE



RCP BEDDING SECTION > 5' FROM **EDGE OF PAVEMENT**

NOT TO SCALE

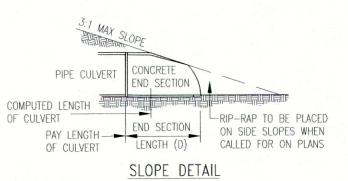


RCP BEDDING SECTION < 5' FROM **EDGE OF PAVEMENT**

NOT TO SCALE

GENERAL NOTES:

CONCRETE IN THESE END SECTIONS SHALL BE THE SAME GRADE AND STRENGTH AS SPECIFIED FOR REINFORCED CONCRETE PIPE, A.S.T.M. DESIGNATION C-76 (AS SET OUT IN STANDARD SPECIFICATIONS). REINFORCEMENT IN THE "C" PORTION SHALL BE THE SAME AS SPECIFIED FOR REINFORCED CONCRETE. REINFORCEMENT IN THE "B" PORTION SHALL HAVE A CROSS SECTIONAL AREA EQUAL TO THAT OF ONE LAYER OF STEEL IN THE "C" PORTION. THE END OF THE PIPE CULVERT SHALL BE PLACED IN THE CONCRETE END SECTION SO THAT THE FLOW LINES ARE FLUSHED. THE JOINT SHALL BE COMPLETELY FILLED WITH MORTAR. VARIATIONS IN DIMENSIONS - THE THICKNESS OF THE CONCRETE, THE POSITION OF STEEL, AND THE INTERNAL DIAMETER OF THE PIPE SHALL CONFORM WITH THE VARIATIONS IN DIMENSIONS AS PROVIDED IN THE SPECIFICATIONS FOR REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE, A.S.T.M. DESIGNATION C-76. WHERE VITRIFIED CLAY CULVERT OR CAST IRON CULVERT PIPE IS USED, A "PIPE END SECTION" COMPARABLE TO THAT AS SHOWN FOR METAL OR CONCRETE SHALL BE FURNISHED AND SHALL BE AS APPROVED BY THE ENGINEER, EXCEPT IN AREAS OF ACID OR MINE WATER THEN THE USE OF METAL END SECTION IS PROHIBITED. END SECTIONS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR EACH "PIPE END SECTION" COMPLETED IN PLACE AND ACCEPTED. CONCRETE PIPE TOE ANCHORS SHALL BE REQUIRED ON ALL CONCRETE PIPE END SECTIONS. THE COST THEREOF SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER EACH "PIPE END SECTION."



NOTE: METAL PIPE END SECTIONS MAY BE USED WITH CONCRETE PIPE, WHERE PERMITTED BY LOCAL CODES, PROVIDING THE METHOD OF CONNECTION IS APPROVED BY THE ENGINEER PRIOR TO INSTALLATION OF PIPE.

PRECAST CONCRETE END SECTION DETAIL

NOT TO SCALE

PLAN DATE: 7/5/201/ CHECK: DESIGN: PROJECT NO.

CONSTRUCTION I

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DET,

ENERAL