PRECAST SEWER MANHOLE
NOT TO SCALE

- FRAME AND COVER TO BE NEENAH FOUNDRY R-1496 FRAME & COVER TO HAVE RAISED LETTERING "SANITARY SEWER"
- AS REQUIRED
- GROUT
- ADJUST TO GRADE WITH 2 TO 5 COURSES OF BRICK
- PRECAST CONCRETE CONE
- PRECAST CONCRETE BARREL SECTION
- ALUMINUM OR HIGH IMPACT PLASTIC MANHOLE STEPS @ 12" O.C.
- SLOPE 1/2" PER FOOT
- 2 STRIPS BUTYL RUBBER SEALANT (1 IN. SQ.) TYP. ALL JOINTS INSURES JOINTS ARE SEALED
- PRECAST CONCRETE BASE SECTION
- MASONRY FILL WITH BRICK CHANNEL AT THE PIPE
- CRUSHED STONE
- 4'-0" I.D.

NOTE: PIPE CONNECTIONS SHALL BE WATERTIGHT
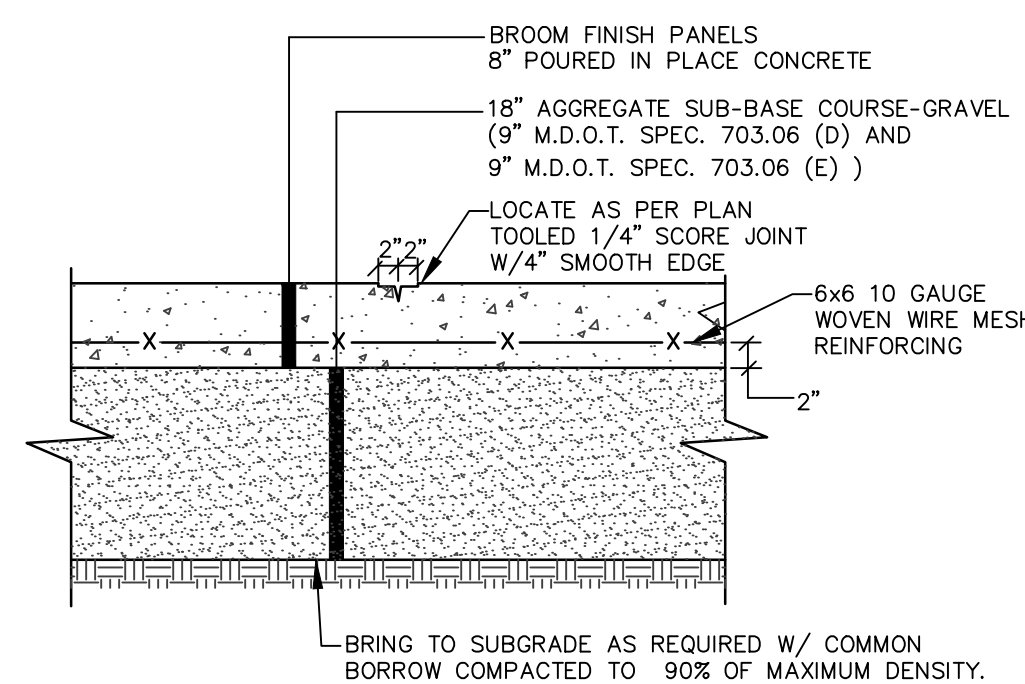FLEXIBLE BOOT CONNECTORS PROVIDES LEAKPROOF CONNECTION

TYP. PERFORATED UNDERDRAIN TRENCH SECTION
NOT TO SCALE

- PAVEMENT BUILDUP (SEE ROAD SECTION)
- CLEAN COARSE SAND AS APPROVED BY TOWN ENGINEER
- GEOTEXTILE FABRIC MIRAFI 140N OR APPROVED EQUAL
- 3/4" CRUSHED STONE
- PERFORATED PIPE
- UNDISTURBED SOIL

TYPICAL TRENCH SECTION
NOT TO SCALE

- PIPE AND TRENCH
- PAVED AREAS / UNPAVED AREAS
- FINISH GRADE
- LOAM AND SEED
- PAVEMENT BUILDUP AS REQUIRED
- SIDE OF TRENCH MAY BE SLOPED BACK TO MEET SAFETY REQUIREMENTS WHERE EXTRA WIDTH IS POSSIBLE
- BACKFILL WITH EXCAVATED MAT'L OR SELECT BACKFILL AS DIRECTED BY THE ENGINEER
- SELECT BACKFILL
- VARIABLE DEPTH IN ACCORDANCE TO PIPE DEPTH
- PIPE SIZE AS NOTED ON PLANS
- MAINTAIN TRENCH WIDTH TO TOP OF SELECT BACKFILL
- 3/4" CRUSHED STONE PIPE BEDDING

TYP. DRAINAGE STRUCTURE & CATCH BASIN
NOT TO SCALE

- FINISH GRADE
- CEMENT MORTAR
- ADJUST TO GRADE WITH BRICK AS REQUIRED FOR DRAINAGE MANHOLES. MATCH AT ROAD CROSS-SLOPE GRADE.
- 2' DIA. OPENING
- PREMOLDED JOINT FILLER
- PRECAST BARREL SECTION AS REQUIRED
- MAX. LENGTH= .6096m (2')
- PIPE STUB
- MORTAR JOINTS (IF FLEXIBLE PIPE, USE FLEXIBLE MANHOLE CONNECTION WITH STAINLESS STEEL BAND)
- 6" PRECAST BASE SECTION
- 6" OF 3/4" CRUSHED STONE
- SEE NOTE 1

NOTES:
1. 4'-0" I.D. TYPICAL. SOME STRUCTURES MAY REQUIRE LARGER I.D. PROVIDE SHOP DRAWINGS.
2. DRAINAGE STRUCTURES TO BE DESIGNED FOR H-20 LOADING.
3. PIPE SIZES AND INVERTS AS NOTED ON PLANS.
4. CATCH BASIN FRAME AND GRATE TO BE ETHERIDGE FOUNDRY E245G AND/OR DR5A (WITH GRANITE STONE) APPROVED EQUAL. LOW PROFILE FRAMES AND COVERS MAY BE USED AS A SUBSTITUTE.
5. DRAINAGE MANHOLE FRAME AND COVER TO BE ETHERIDGE FOUNDRY E245S OR APPROVED EQUAL.

TYPICAL CONCRETE SLAB
NOT TO SCALE

- 8" POUR IN PLACE CONCRETE WITH BROOM FINISH
- #5 REBAR @ 12" O.C., E.W.
- 6" CONCRETE SLAB F'c=4000 psi
- 18" AGGREGATE SUB-BASE COURSE GRAVEL (9" MDOT SPEC 703.06 D AND 9" MDOT SPEC 703.06 E)
- BRING SUBGRADE AS REQUIRED WITH COMMON BORROW COMPACTED TO 90% OF MAXIMUM DENSITY

NOTE:
1. PROVIDE CONTRACTION CONTROL JOINTS EVERY 6' IN EACH DIRECTION

HEAVY DUTY CONCRETE PAVEMENT
NOT TO SCALE

- BROOM FINISH PANELS 8" POURED IN PLACE CONCRETE
- 18" AGGREGATE SUB-BASE COURSE-GRAVEL (9" M.D.O.T. SPEC. 703.06 (D) AND 9" M.D.O.T. SPEC. 703.06 (E))
- LOCATE AS PER PLAN TOOLED 1/4" SCORE JOINT W/4" SMOOTH EDGE
- 6x6 10 GAUGE WOVEN WIRE MESH REINFORCING
- BRING TO SUBGRADE AS REQUIRED W/ COMMON BORROW COMPACTED TO 90% OF MAXIMUM DENSITY.
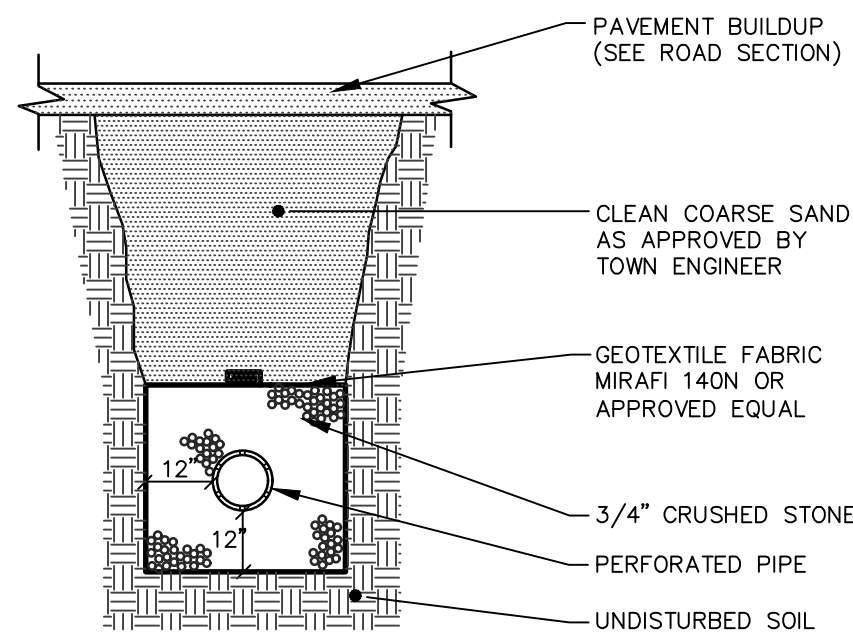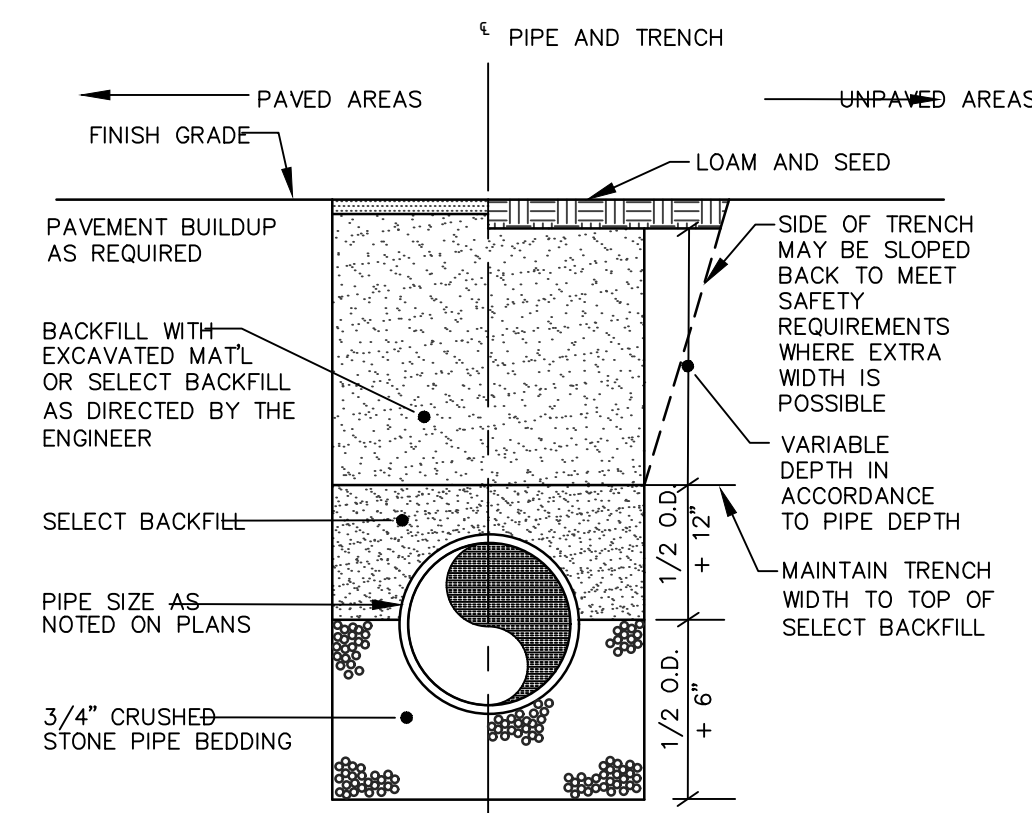
NOTES:
1. COMPACT GRAVEL SUB-BASE, BASE COURSE TO 92% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
2. CONTRACTOR SHALL SET GRADE STAKES MARKING SUBBASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.
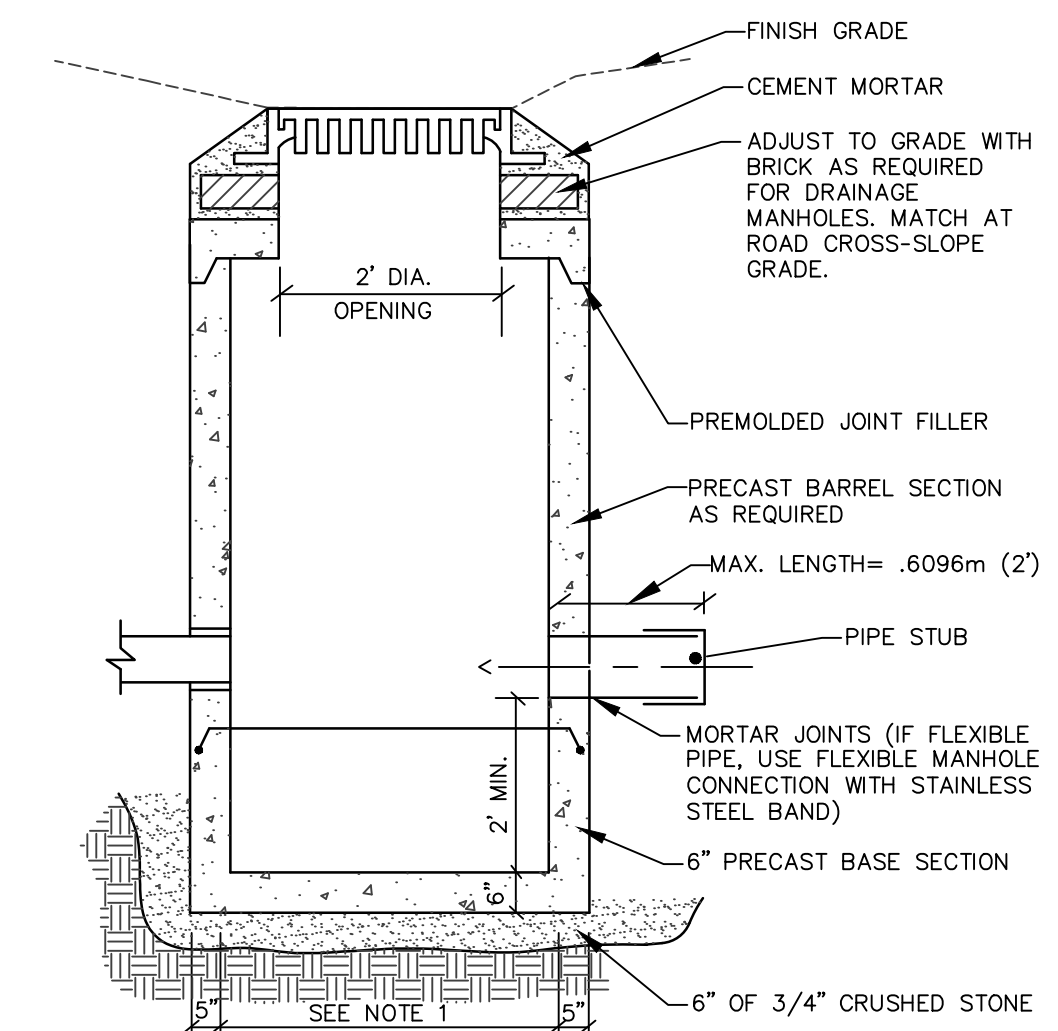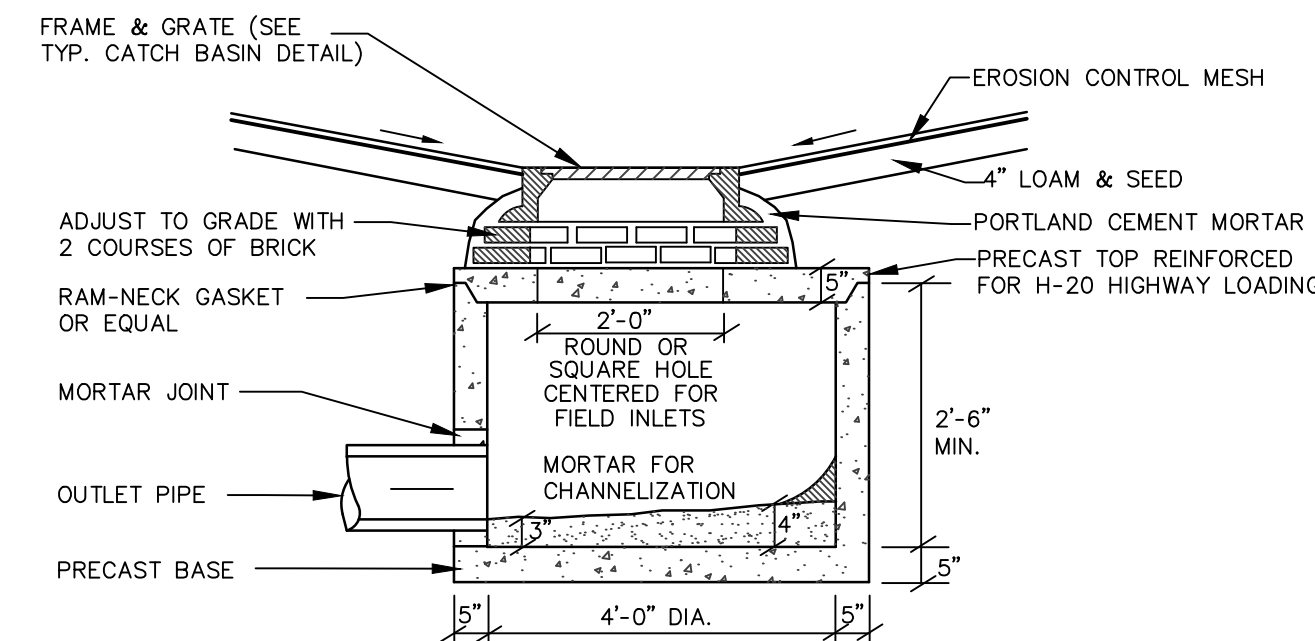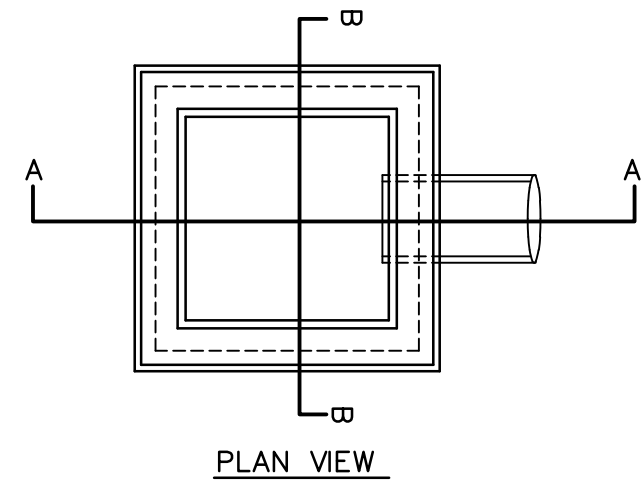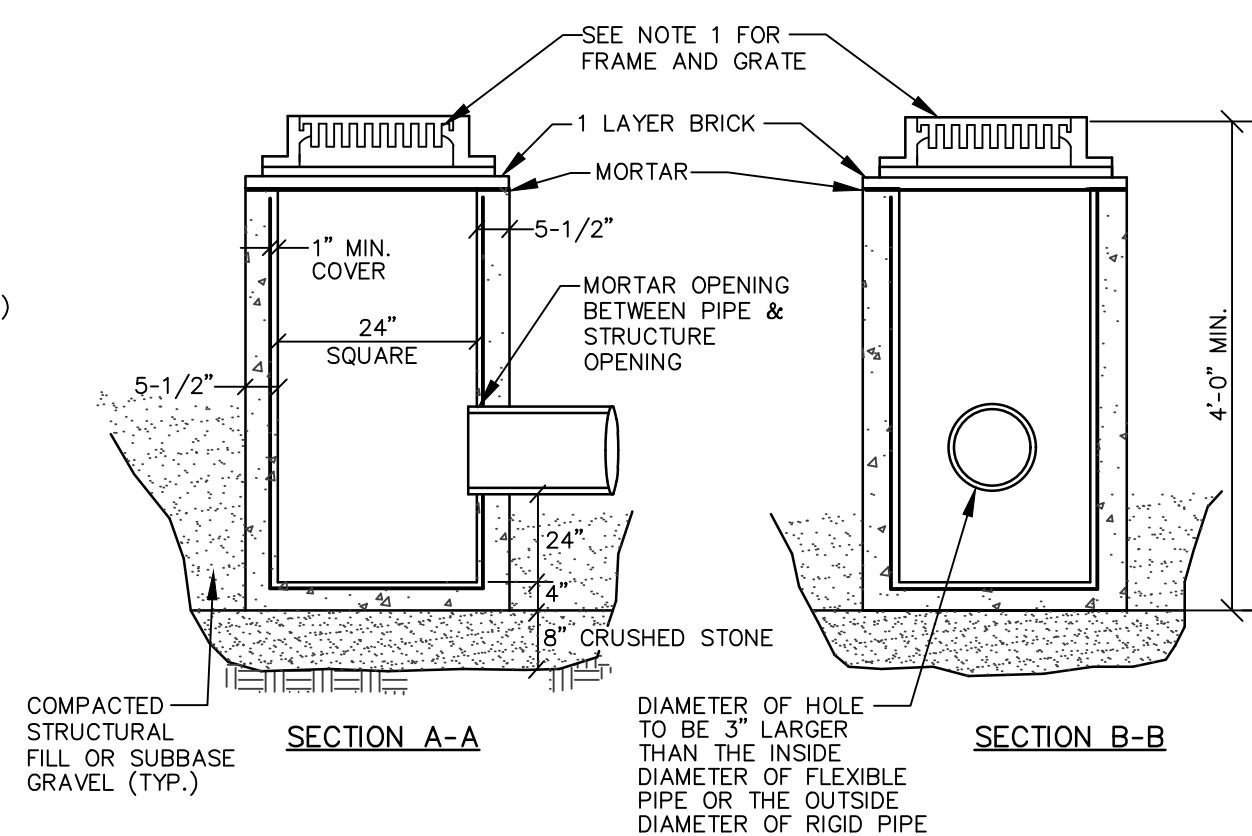
PLAN VIEW

"TYPE F" CATCH BASIN
NOT TO SCALE

- SEE NOTE 1 FOR FRAME AND GRATE
- 1 LAYER BRICK
- MORTAR
- 5-1/2"
- 1" MIN. COVER
- 24" SQUARE
- MORTAR OPENING BETWEEN PIPE & STRUCTURE OPENING
- COMPACTED STRUCTURAL FILL OR SUBBASE GRAVEL (TYP.)
- 8" CRUSHED STONE
- DIAMETER OF HOLE TO BE 3" LARGER THAN THE INSIDE DIAMETER OF FLEXIBLE PIPE OR THE OUTSIDE DIAMETER OF RIGID PIPE
- SECTION A-A
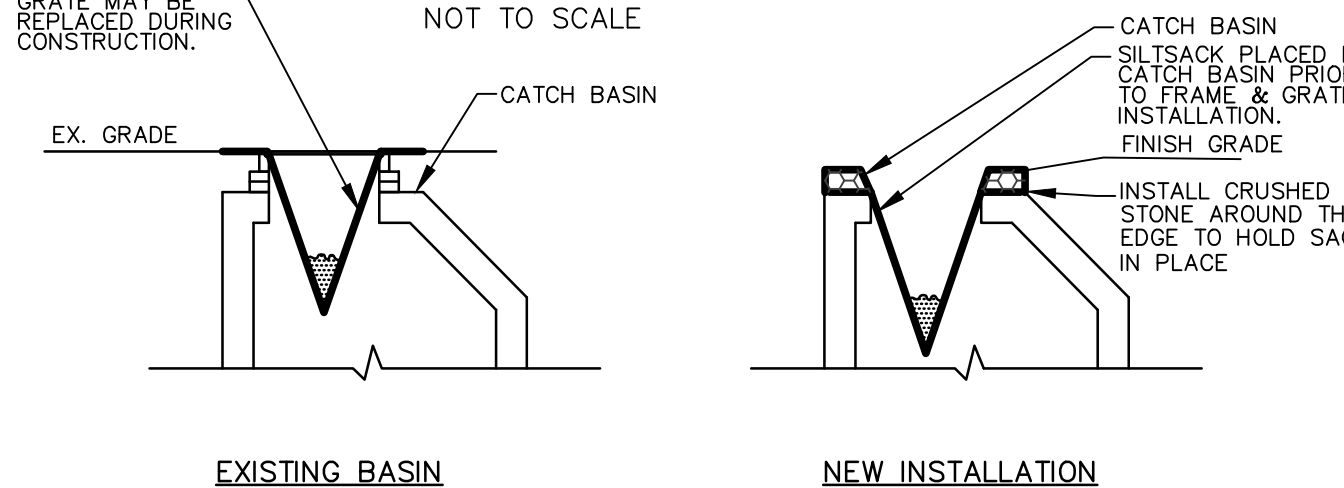- SECTION B-B

NOTES:
1. FRAME SHALL BE FOR 24" SQUARE GRATE, EAST JORDAN FOUNDRY 5250, OR APPROVED EQUAL.
2. ENTIRE CATCH BASIN WITH EXCEPTION OF LEVELING BRICK FRAME AND GRATE TO BE PRECAST AS SINGLE PORTLAND CEMENT CONCRETE UNIT.
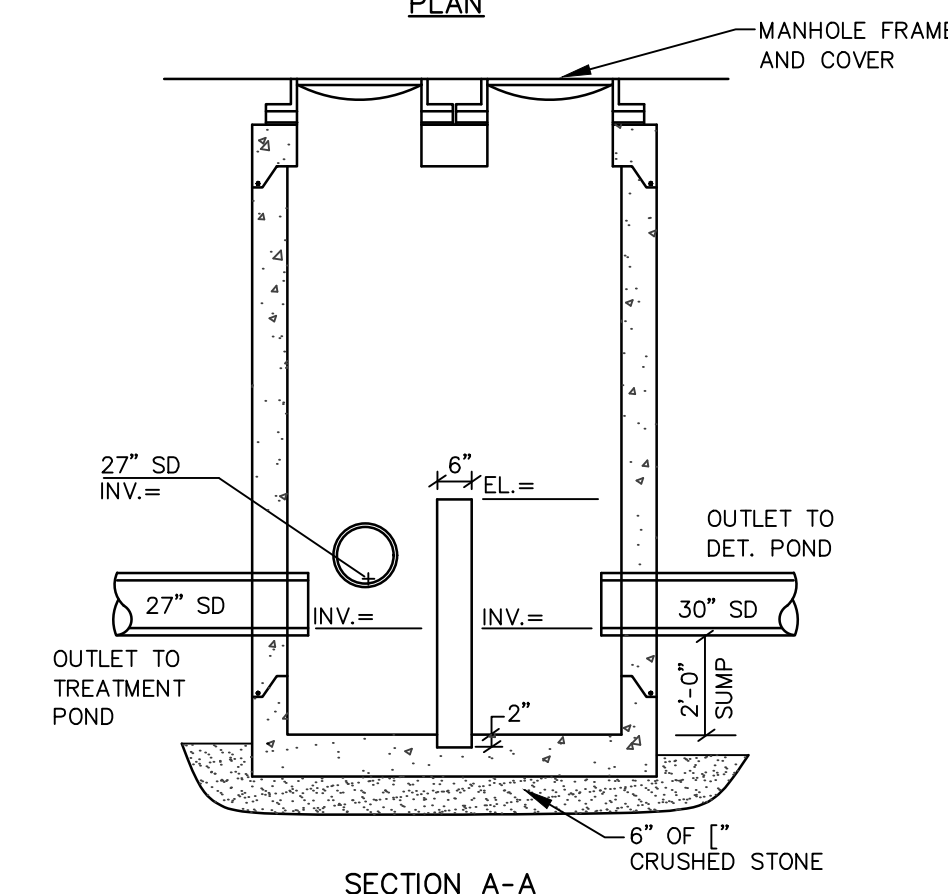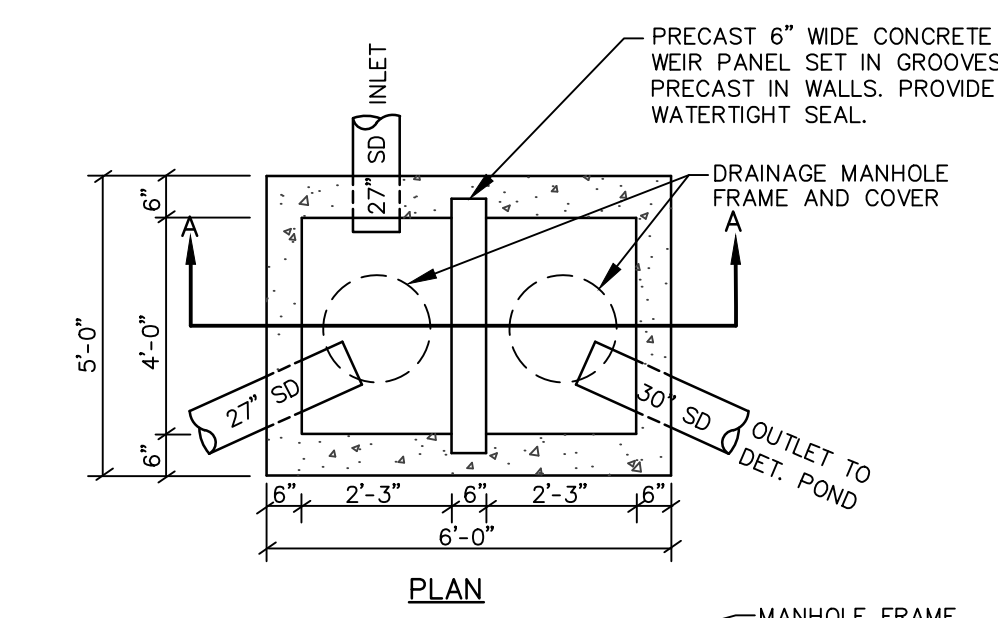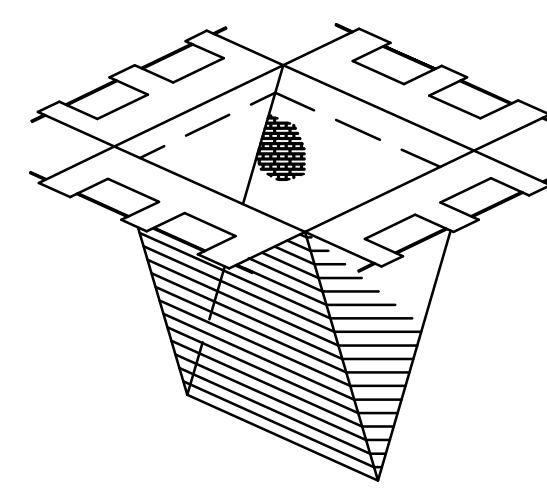
FIELD INLET CATCH BASIN
NOT TO SCALE

- FRAME & GRATE (SEE TYP. CATCH BASIN DETAIL)
- EROSION CONTROL MESH
- 4" LOAM & SEED
- ADJUST TO GRADE WITH 2 COURSES OF BRICK
- PORTLAND CEMENT MORTAR
- PRECAST TOP REINFORCED FOR H-20 HIGHWAY LOADING
- RAM-NECK GASKET OR EQUAL
- ROUND OR SQUARE HOLE CENTERED FOR FIELD INLETS
- MORTAR JOINT
- OUTLET PIPE
- MORTAR FOR CHANNELIZATION
- PRECAST BASE
- 4'-0" DIA.

NOTES:
1. SUBMIT SHOP DRAWINGS FOR OWNERS APPROVAL.
2. SEE PLAN AND PROFILE FOR INVERT AND RIM ELEVATIONS.

SILT SACK PROTECTION

CATCH BASIN PROTECTION DETAIL (FOR PAVED AREAS)
NOT TO SCALE

- PLACE SILTSACK IN EX. GRATE. EX. GRATE MAY BE REPLACED DURING CONSTRUCTION.
- EX. GRADE
- CATCH BASIN
- EXISTING BASIN
- CATCH BASIN SILTSACK PLACED IN CATCH BASIN PRIOR TO FRAME & GRATE INSTALLATION. FINISH GRADE
- INSTALL CRUSHED STONE AROUND THE EDGE TO HOLD SACK IN PLACE
- NEW INSTALLATION

NOTES:
PRIOR TO FINAL GRADING AND PAVING OPERATIONS BEGIN A CATCH BASIN INSERT (SUCH AS A SILT SACK OR A DANDY BAG II) MUST BE INSTALLED IN EACH BASIN PER MANUFACTURES INSTRUCTIONS. HAY BALES SHOULD BE REMOVED ONCE INSERTS ARE INSTALLED.

INLET CONTROL STRUCTURE
NOT TO SCALE

- PRECAST 6" WIDE CONCRETE WEIR PANEL SET IN GROOVES PRECAST IN WALLS. PROVIDE WATERTIGHT SEAL.
- DRAINAGE MANHOLE FRAME AND COVER
- OUTLET TO DET. POND
- PLAN
- MANHOLE FRAME AND COVER
- 27" SD INV.=
- OUTLET TO DET. POND
- 27" SD INV.=
- 30" SD INV.=
- OUTLET TO TREATMENT POND
- SUMP
- 6" OF 1" CRUSHED STONE
- SECTION A-A

NOTE:
SUBMIT SHOP DRAWINGS AND STRUCTURE SPECIFICATIONS FOR OWNER/ENGINEER APPROVAL.

OCS CAP ORIFICE SIZE	
OUTLET CONTROL STRUCTURE	ORIFICE DIAMETER (IN)
OCS 1	0.8
OCS 2	0.8
OCS 3	0.7
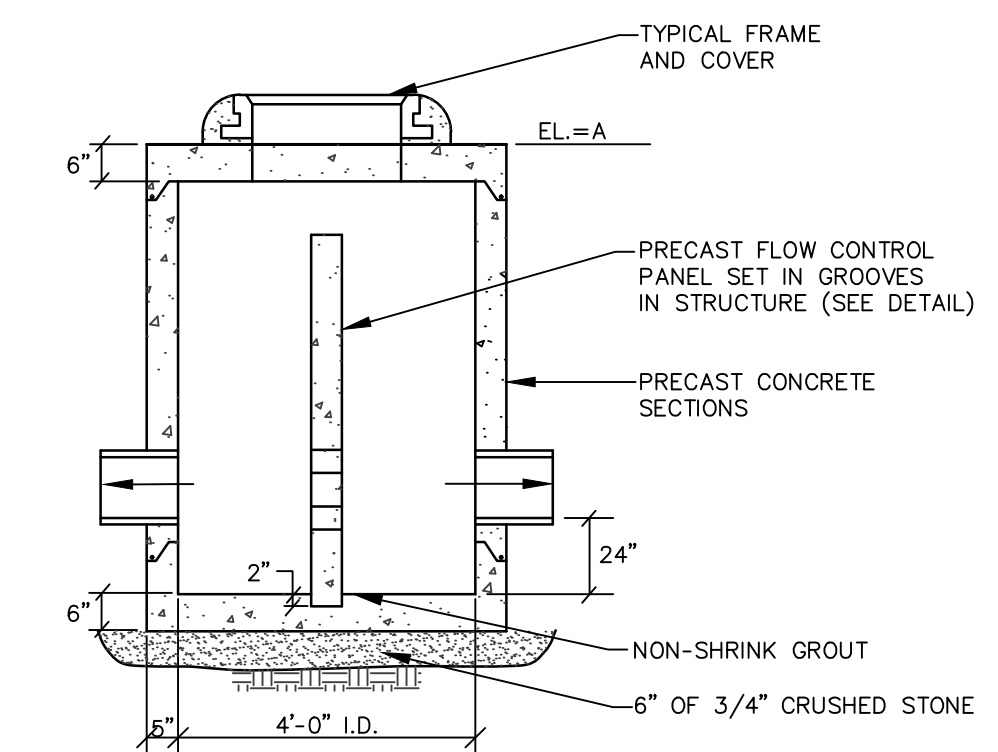
OUTLET STRUCTURE DETAIL
NOT TO SCALE

- TYPICAL FRAME AND COVER
- PRECAST FLOW CONTROL PANEL SET IN GROOVES IN STRUCTURE (SEE DETAIL)
- PRECAST CONCRETE SECTIONS
- NON-SHRINK GROUT
- 6" OF 3/4" CRUSHED STONE
- 4'-0" I.D.
- EL.=A

PRECAST FLOW CONTROL PANEL
NOT TO SCALE

- 4'-4"
- ORIFICES
- DIA.=G
- DIA.=F
- 6" MIN.
- EL.=B
- EL.=C
- EL.=D
- EL.=E
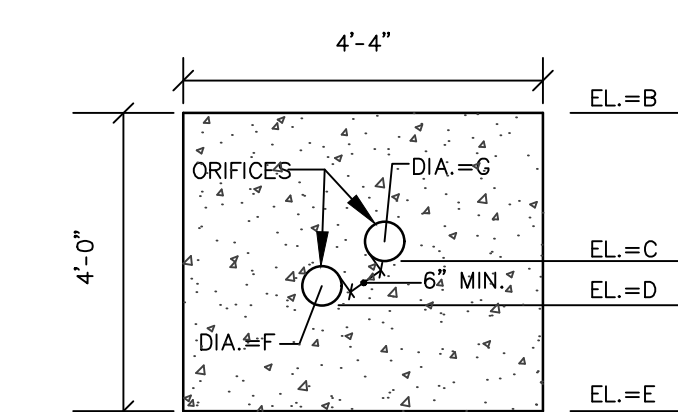
CONTROL STRUCTURE SCHEDULE

DETENTION BASIN	ELEVATION (ft.)						ORIFICE ~ (IN)
	A	B	C	D	E		G
I							
II							