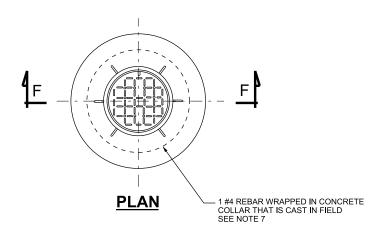


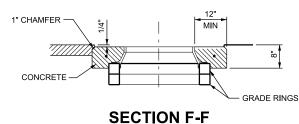
SECTION A-A

SECTION B-B

MAX PIPE O.D.		
DIA	45 DEG ANGLE	90 DEG ANGLE
4'- 0"	27"	18"
5'- 0"	36"	24"

PRECAST SECTIONS	MAX HEIGHT
GRADE RINGS	8"
COMBINED GRADE RINGS AND LID	18"
CONES	36"
RISERS	48"





DESIGN DATA

STRUCTURAL STEEL: Fy = 36,000 psi

STRUCTURAL CONCRETE: f'c = 4,000 psi; fy = 60,000 psi; n = 8

NOTES

- 1. PROVIDE PRECAST CONCRETE STANDARD MANHOLE SECTIONS THAT CONFORM TO AASHTO M 199 (ASTM C 478) EXCEPT THAT THE MINIMUM WALL THICKNESS WILL BE 3 INCHES.
- 2. USE DEFORMED-CARBON REINFORCING STEEL BARS CONFORMING TO M 31, GRADE 60 OR WELDED WIRE REINFORCING CONFORMING TO AASHTO M 55 OR AASHTO M 221.
- 3. COATED STEEL IS NOT REQUIRED FOR PRECAST MANHOLES.
- 4. USE CLASS AA (AE) CONCRETE.
- 5. USE TYPE II CEMENT (LOW ALKALI).
- 6. PROVIDE 1 INCH OF CONCRETE COVER TO REINFORCING STEEL IN MANHOLE WALLS AND CONE.
- 7. PROVIDE 2 INCHES OF CONCRETE COVER TO REINFORCING STEEL IN MANHOLE BASE AND COLLAR.
- 8. PLACE STEPS BEGINNING NOT LESS THAN 12 INCHES BELOW FINISH GRADE AND PLACE ADDITIONAL STEPS ACCORDING TO STD DWG GF 6. MANUFACTURER WILL ADJUST GRADE RINGS AND RISER HEIGHTS TO ACCOMMODATE UNIFORM SPACING OF STEPS ACCORDING TO STD DWG GF 6.
- 9. USE 3, 4, 6, OR 8 INCH GRADE RINGS FOR RISERS.
- 10. SEE ROADWAY PLANS FOR NUMBER, LOCATION, AND SIZE OF PIPE.
- 11. REMOVE THE CONE AND GRADE RINGS AND ADJUST THE MANHOLE ELEVATION WITH THE APPROPRIATE MANHOLE SECTION IF THE REQUIRED MANHOLE ADJUSTMENT IS MORE THAN 1 FT. MATCH FINISH GRADE FOR THE CONE SECTION AND GRADE RINGS, FRAME AND LID.
- 12. REMOVE DEBRIS FROM MANHOLE AND PIPE INVERTS.
- 13. REPAIR OR REPLACE MANHOLE SECTIONS, CONES, AND GRADE RINGS DAMAGED BY CONSTRUCTION TO THE SATISFACTION OF THE ENGINEER, AT NO COST TO THE DEPARTMENT.
- 14. USE STD DWG GF 2 FOR RING AND LID UNLESS OTHER GF SERIES IS SHOWN ON PLANS.
- 15. PROVIDE HYDRAULIC CEMENT MORTAR ACCORDING TO ASTM C 1329.
- 16. DO NOT OVER EXCAVATE, PLACE 6 INCH MIN UTBC BEDDING ACCORDING TO STANDARD SPECIFICATION 02721 ON FIRM SUBGRADE. DO NOT USE CRUSHED ROCK IN ACTIVE WATER TABLE WITHOUT APPROVAL OF THE ENGINEER.
- 17. CAST FORMED INVERT TO BE POURED IN PLANT, WHEN SPECIFIED.
- 18. MANUFACTURE MANHOLE RISERS, BASES, CONES, AND GRADE RINGS INCLUDING STEEL REINFORCING WHERE REQUIRED ACCORDING TO ASTM C 478.

SUPPLEMENTAL DRAWING

TRANSPORTATION
AND BRIDGE CONSTRUCTION Ю UTAH DEPARTMENT

> RECAST CONCRETE TANDARD MANHOLE

STD. DWG. NO.

С. С.

CB 11